

GE Healthcare

Site Readiness QuickStart Guide

Mac-Lab/CardioLab Edition



imagination at work

Site Readiness QuickStart Partnership Guide

Mac-Lab/CardioLab Edition

Your site specific plan and design requires the use of the full set of planning information and specifications found in the GE Healthcare Pre-Installation Manual (PIM) for your system. This can be found at:

<http://www.gehealthcare.com/company/docs/index.html>



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Internet – gehealthcare.com
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Use of this Guide

This Site Readiness QuickStart Partnership Guide is intended to provide an overview of key process steps, scheduling, resources, and critical items needed for preparing your site for delivery and installation of your Mac-Lab / CardioLab.

You can utilize this Guide with your facilities team, IT department, System users, architects, engineers, contractors or others involved in the design and construction of your site. This Guide is written for multiple levels of interest and detail; each section is more detailed as you proceed through the Guide. Some material content is repeated in multiple sections for completeness of information within a section.

The Site Readiness QuickStart Partnership Guide contains the following sections (with targeted audiences):

- [Overview](#) (Intended for all team members)
Overview of the Site Readiness process
- [Process Flow](#) (Cardiolab Director, IT department, System Users, Facilities, Engineer, Contractor)
Map of Site Readiness process steps
- [Process Details](#) (Cardiolab Director, IT department, Engineer, Facilities Department, Contractor)
Details for process step tasks
- [Critical Items](#) (Cardiolab Director, IT department, Engineer, Facilities Department, Contractor)
Overview information on key site requirements, unique to a Mac-Lab / CardioLab, and features needed at your site
- [Safety Details](#) (All team members)
- [Assessment List](#) (all team members)
List of critical items required prior to installation

Your GE Healthcare Team is here to help. Your Project Manager (PM) is your GE focal point. Please contact your PM with any questions.

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Congratulations on the purchase of your new Mac-Lab/CardioLab!

Installation of your new GE Healthcare Mac-Lab / CardioLab requires that your site is prepared to satisfy the product's unique specifications. Our mutual goal is to prepare a quality site for delivery and installation of your Mac-Lab / CardioLab in a timely manner.

GE Healthcare has extensive experience assisting customers in preparing their sites for installation.

This Guide is intended to give you, the customer an overview of the Site Readiness process required for preparing your site for the installation of your Mac-Lab / CardioLab and contains the following:

- Site Readiness Process Flow
- Support provided by GE Healthcare
- Summary of Critical Items
- Safety Details
- Assessment List of Site Readiness Requirements for Installation

In addition, your site specific plan and design requires the use of the full set of planning information and specifications found in the GE Healthcare Pre-Installation Manual (PIM) for your Mac-Lab / CardioLab.

Please contact your GE Project Manager if you have not yet received a copy of the Pre-Installation Manual (PIM) or you can view and download it electronically via this link:

<http://www.gehealthcare.com/company/docs/siteplanning>

An electronic version of the Site Readiness QuickStart Partnership Guide is also available at the above link.

Your GE Healthcare Team is here to help. Your Project Manager (PM) is your GE focal point.
Please contact your PM with any questions.

Project Team

This Guide is intended for both experienced and inexperienced customer teams. GE Healthcare recommends that this Guide be utilized by your team members, potentially consisting of:

- Senior Management
- Project Manager
- Information Technology Representative
- Architect and Engineer team
- Construction team
- System Users
- Other personnel affected by the project

Your team's involvement is critical to the success of your project's design and installation process. It is very important to identify your specific team members and start team meetings early in the project in order to develop a quality, objective schedule.

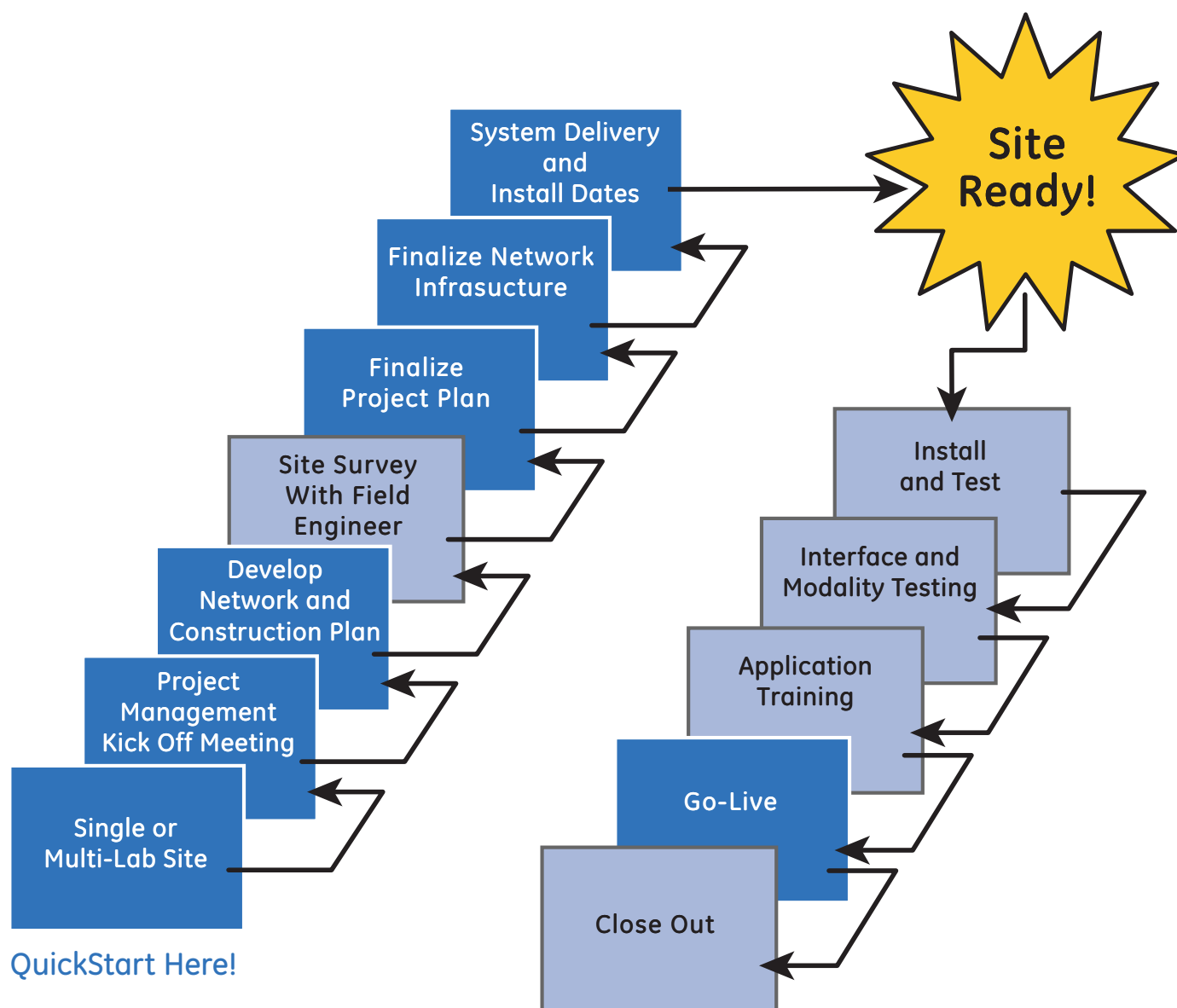
A well developed and executed plan and project schedule helps to minimize the possibility of delays in your system's installation thereby potentially avoiding:

- Lost revenue (loss of scheduled patient exams)
- Rescheduling installation
- Rescheduling training at customer expense

Process Flow

An understanding of the process steps by team members supports the creation of an objective schedule. In order to do this, ALL team members should have a good understanding of the steps in this process.

This Partnership Guide describes the typical Site Readiness process steps required for each step in order to support this need. You will need to determine if your project has special needs not addressed by this typical process flow, and develop the specific schedule for your project.



GE Healthcare Support

Your Project Manager

GE Healthcare provides support through your Project Manager. This support for your Site Readiness process will be provided through the following primary activities:

- Notify GE Healthcare vascular installation specialist of involvement with Innova-Invasive projects
- Assist in developing a preliminary site layout of your Mac-Lab / CardioLab
- Provide your architect and engineer with support to interpret the specifications
- Provide supporting information to your contractor(s) for schedule development and construction planning
- Assist in monitoring completion of the Site Readiness Assessment checklists for the Mac-Lab / CardioLab
- Assist in the coordination of delivery and installation activities
- Confirm GE Healthcare Field Engineer schedule
- Complete close out and coordinates pick-up of return items
- Coordinate applications training

Your Project Manager is your
GE Healthcare Focal Point

Key Responsibilities (this is not a comprehensive list of responsibilities)

Customer

- Focus communications among team members
- Review your GE Healthcare Mac-Lab / CardioLab Terms and Conditions of sale
- Completion of site specific items prior to Mac-Lab / CardioLab installation – Refer to the Assessment Lists
- Ensure a hospital representative is on site for acceptance at time of delivery
- Ensure Site Readiness Assessment checklist is complete prior to installation

Architect / Engineer

- Develop overall preliminary plan for customer site, and coordinate with GE Healthcare Project Manager
- Develop construction drawings and specifications
- Coordinate design with the GE Healthcare Pre-Installation Manual, ensuring all requirements are met
- Comply with applicable code requirements
- Coordinate plan review and approval process for permits
- Communicate with GE Healthcare Project Manager – questions and changes

Contractor

- Develop and communicate construction schedule to entire team
- Obtain construction permits
- Own the construction schedule, ensure delivery dates are met
- Build the site...manage sub-contractors...deliver quality site
- Coordinate / communicate all issues with architect, engineer and GE Healthcare Project Manager
- Arrange for inspections
- Ensure all safety requirements are met and site is secure

Getting Started

GE Healthcare recommends using the Site Readiness QuickStart Partnership Guide with your team as you work through the Site Readiness process to 'build a home' for your new GE Healthcare Mac-Lab / CardioLab. This Guide is available electronically at the link below *.

Contact your GE Healthcare Project Manager with any questions or needs.

GE Healthcare looks forward to supporting you with an on-time installation for your new Mac-Lab / CardioLab.

Please start the following critical processes: (if you have not already)

***Obtain the GE Healthcare Pre-Installation Manual
from your GE Project Manager****

***Select the potential location(s)
for your new Mac-Lab / CardioLab systems***

If systems are going to be networked, IT involvement is critical

***To ensure participant availability, schedule Project
Kick-Off Meeting***

* Documents are available in print (from your GE Project Manager) or by electronic media at the link below.

<http://www.gehealthcare.com/company/docs/siteplanning>

Process Flow

This Process Flow section provides you with a high level map of the entire process from lab selection to delivery and installation of your Mac-Lab / CardioLab.

An understanding of the process steps by team members supports the creation of an objective schedule. In order to do this, ALL team members should have a good understanding of the steps in this process.

This section describes the typical Site Readiness process steps of each step in order to support this need. You will need to determine if your project has special needs not addressed by this typical process flow, and then develop the specific schedule for your project.

The actual duration of your overall schedule will depend on the configuration of your equipment order and the needs for your site preparation.

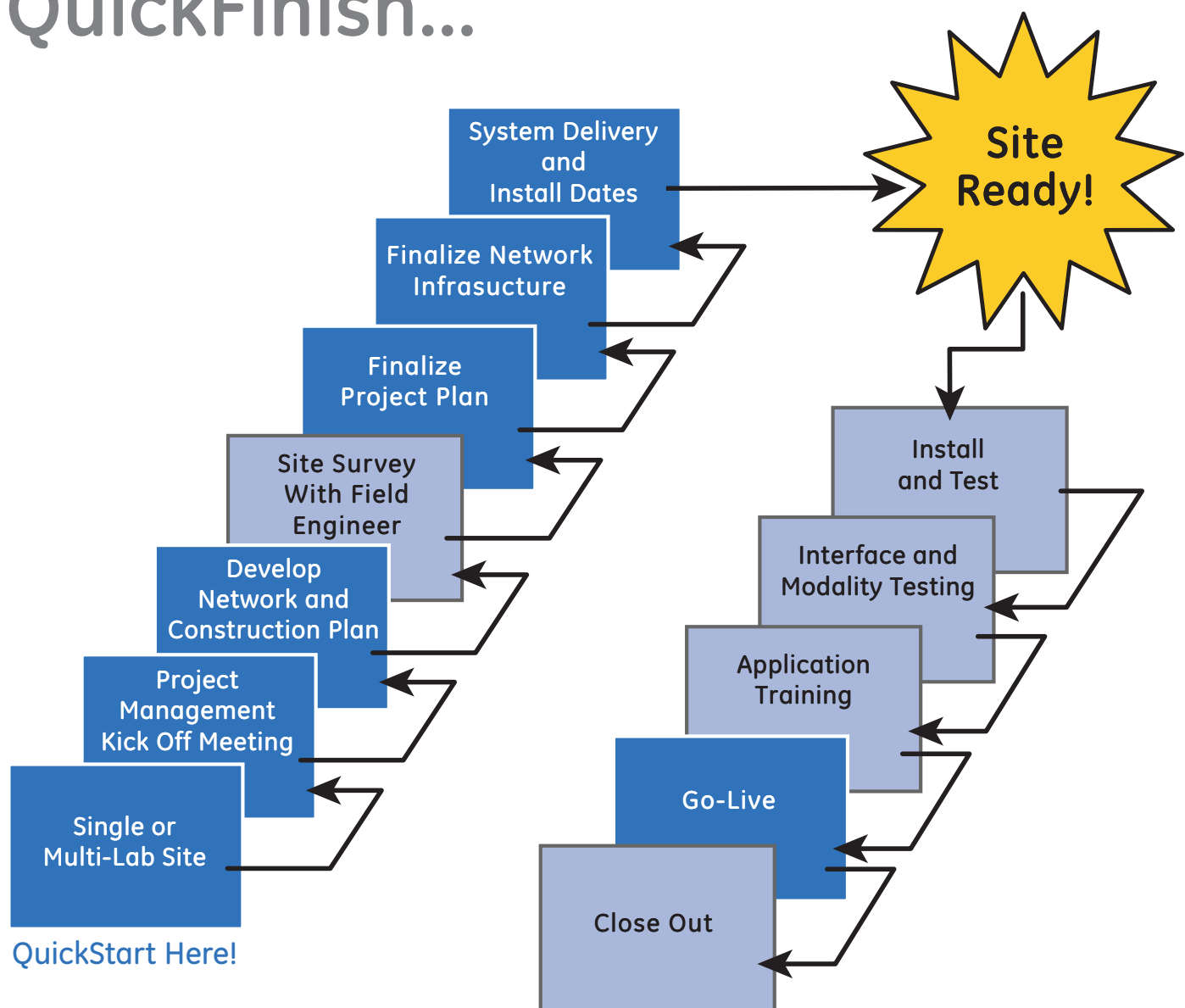
Also, your site specific plan and design requires the use of the full set of planning information and specifications found in the GE Healthcare Pre-Installation Manual (PIM) for your Mac-Lab / CardioLab.

Please contact your GE Healthcare Project Manager if you have not yet received a copy of the GE Healthcare Pre-Installation Manual (PIM). You can view and download the PIM electronically via this link:

<http://www.gehealthcare.com/company/docs/siteplanning>

An electronic version of this Site Readiness QuickStart Partnership Guide is also available at the link above.

QuickStart... for a QuickFinish...



This portion of the Process Flow section outlines further task descriptions for each step. Additional details are outlined in the Process Details section.

Note: This is not a comprehensive list of tasks or requirements in the Site Readiness process. You must work with your team to define all the specific scope and tasks for your site.

Select Single or Multi-Lab Site

- Determine whether you are purchasing a single lab or multiple labs
- This can consist of Mac-Lab, CardioLab, or a ComboLab

Project Management Kick Off Meeting

- Coordinate all personnel and define responsibilities needed for the project
- Review sales order with customer
- Establish GE Healthcare HQ training

Develop Network and Construction Plan

- Review and coordinate Project Plan with the hospital's IT department
- Review and coordinate construction plan and layout with hospital's Project Manager and construction representative

 **Site Survey
With Field Engineer**

- Identify equipment locations
- Identify conduit layout
- Verify power requirements
- Communicate with hospital's IT department

 **Finalize
Project Plan**

- Meet with GE Healthcare Project Manager, Cathlab coordinator, IT personnel, and GE Healthcare's field representatives (FE and vascular installation specialist)

 **Finalize Network
Infrastructure**

- Prepare network and install network drops
- Install power drops
- Install ML/CL system cables, control to procedure rooms
- Assist with boom mounts and balancing

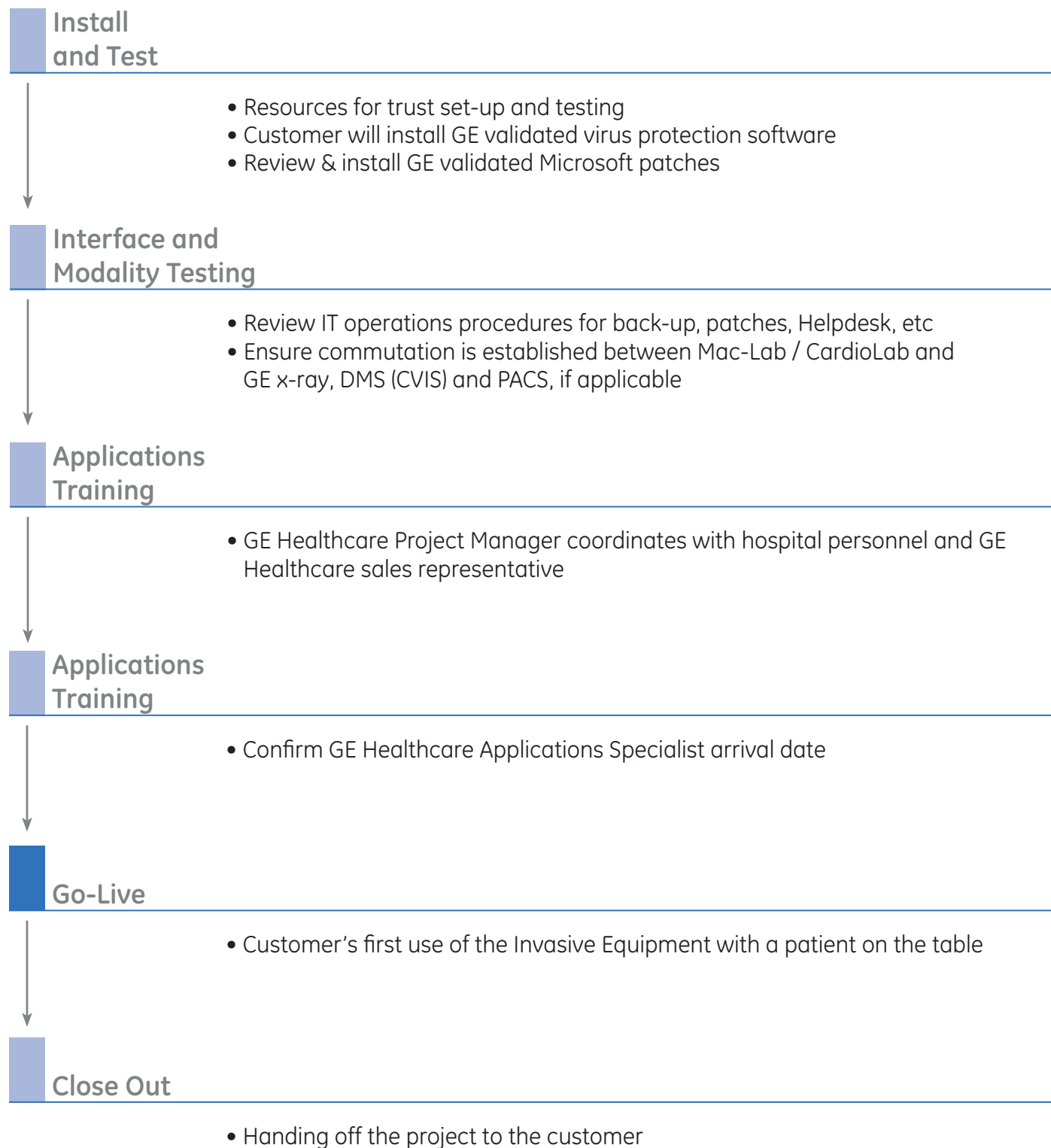
 **System Delivery
and Install Dates**

- GE Healthcare Project Manager coordinates with hospital personnel and GE Healthcare sales representative

 Site Ready!

- Complete construction activities prior to install
- Ensure all Assessment List items are complete

 Customer Primary
(GE Secondary) GE Primary
(Customer Secondary)



 Customer Primary
(GE Secondary)

 GE Primary
(Customer Secondary)

Site Readiness Assessment Checklists

Reducing down time for our customers is a very high priority for GE Healthcare.

GE Healthcare has created the following Assessment checklists of critical items that must be accomplished prior to the installation of your new GE Healthcare Mac-Lab / CardioLab.

If any of these tasks are not performed by time of installation, it is possible that GE Healthcare may have to reschedule the installation of your labs.

Note: These Assessment checklists are available in checklist form in the 'Assessment Lists' section at the end of the document and need to be used by your project manager, IT department and your GE Healthcare Project Manager to determine if your site is ready for installation of your Mac-Lab / CardioLab. Your project manager will be responsible for maintaining the project schedule and communicate any changes.

A comprehensive Pre-Installation Checklist is found in the GE Healthcare Pre-Installation Manual (PIM).

Process Details

The pages of this section contain additional information explaining the process steps outlined in the Process Flow section.

In addition, your site specific plan and design requires the use of the full set of planning information and specifications found in the GE Healthcare Pre-Installation Manual (PIM) for your Mac-Lab / CardioLab.

Please contact your GE Healthcare Project Manager if you have not yet received a copy of the PIM or you can view and download the PIM electronically via this link:

<http://www.gehealthcare.com/company/docs/siteplanning>

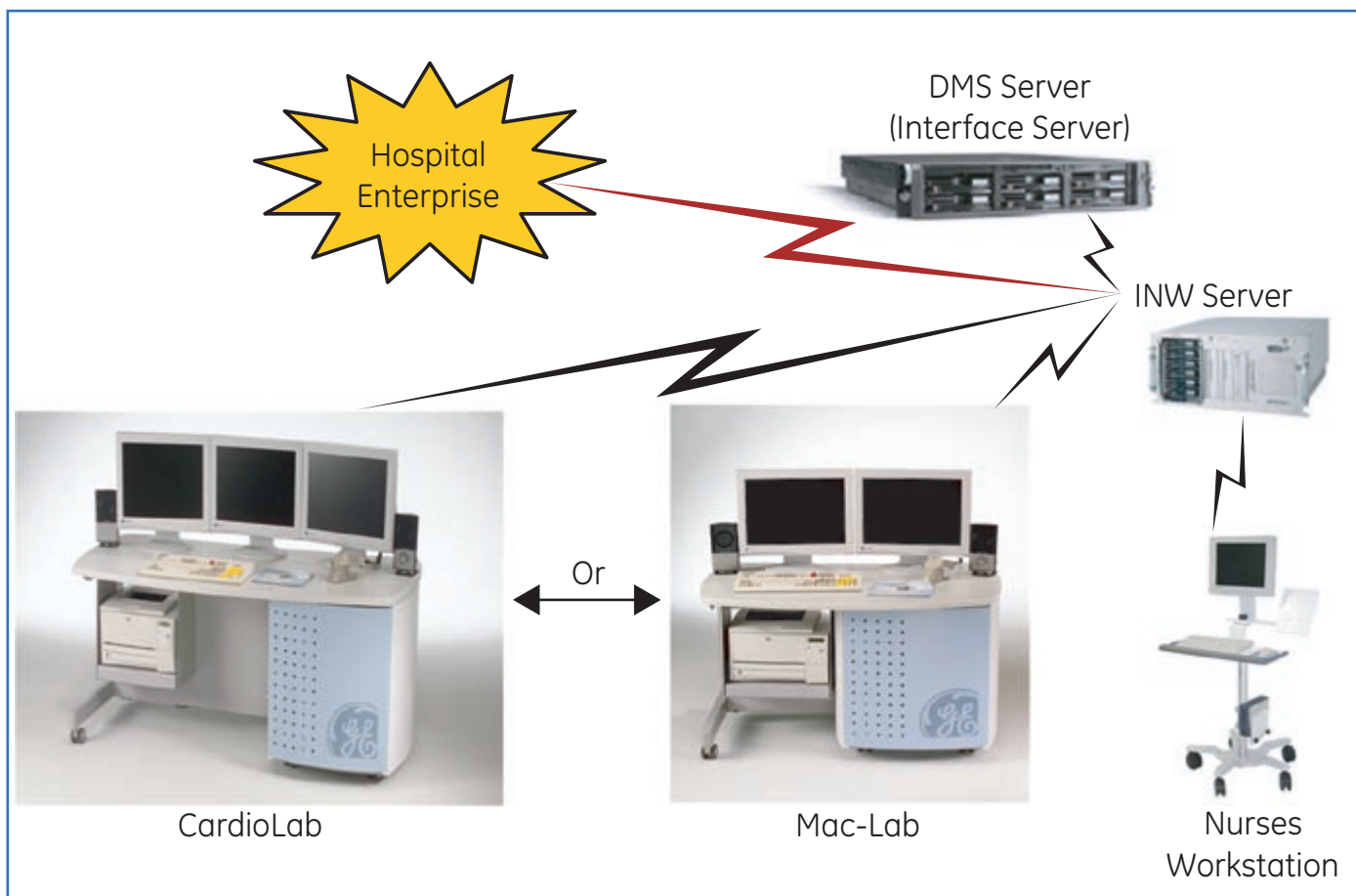
An electronic version of the Site Readiness QuickStart Partnership Guide is also available at the above link.

 Customer Primary
(GE Secondary)  GE Primary
(Customer Secondary)

Select Single or Multi-Lab Site

There are several options you have when purchasing a Mac-Lab / CardioLab from GE Healthcare.

Both can be standalone or networked.



Project Management Kick Off Meeting

A kick-off meeting is important in order for all parties involved to understand the requirements to ensure a smooth and on-time installation.

Here are some factors to consider and items to be completed (but not limited to) during this meeting:

- Obtain and install all network equipment and customer supplied equipment racks
- GE Healthcare's Project Manager will discuss the policy for Software Only purchases
 - GE Healthcare will provide the instructions and the software...you, the customer are responsible for the installation
- Customer must provide resources to work with the GE Remote Operation Center (ROC) to enable remote support capability for servers and lab systems
- Remind customer to purchase pressure transducer cables for the TRAM
- Customer must get these from your transducer supplier before the planned Go-Live date
- Determine who will be attending both the GE Healthcare HQ DMS and Mac-Lab / CardioLab training
 - Customer will come to the GE Healthcare HQ training prepared with staff inventory list
 - DMS HQ training will assist you in creating the necessary CD's needed to complete the DMS installation
 - Mac-Lab / CardioLab HQ training will assist you in creating customized macros and reports necessary to complete your customization
- If an after hour installation is required, an additional charge will be applied
 - Please notify your GE Healthcare Project Manager to obtain a quote

Develop Network and Construction Plan

The network and construction plan is critical to a successful installation. In order to achieve this, GE Healthcare must understand what type of network layout that you are going to be using.

Network Plan

- INW domain with 2-way Trust
- INW domain with 1-way Trust
- If anything other than the above, please contact your GE Healthcare Project Manager

Construction Plan

- It is crucial that all parties, including the contractor, Cathlab coordinator and GE Healthcare, are in synch with the layout of the lab to avoid rework and addition cost to the customer

Site Survey With Field Engineer

To ensure that your lab will function to its highest potential, your GE Healthcare Field Engineer (FE) or vascular installation specialist will conduct a Site Survey before the installation of your Mac-Lab / CardioLab. Timing for this visit will be established between your Project Manager, GE Healthcare's Project Manager and Field Engineer.

At this time GE Healthcare can determine the following:

- Conduit is in place and is complete
- Power requirements met per GE Healthcare specifications
- Confirm with you the physical layout of the system in conjunction with the Imaging system
- Confirm the locations for the servers, acquisition systems and network devices
- Obtain network configurations for the Mac-Lab / CardioLab system
- Confirm installation date

Finalize Project Plan

A meeting should be coordinated by GE Healthcare's Project Manager including Cathlab coordinator, hospital's project management, GE Healthcare Field Engineer (FE), GE Healthcare vascular installation specialist IT personnel, and PACS, to ensure everything is inline with the installation date.

Finalize Network Infrastructure

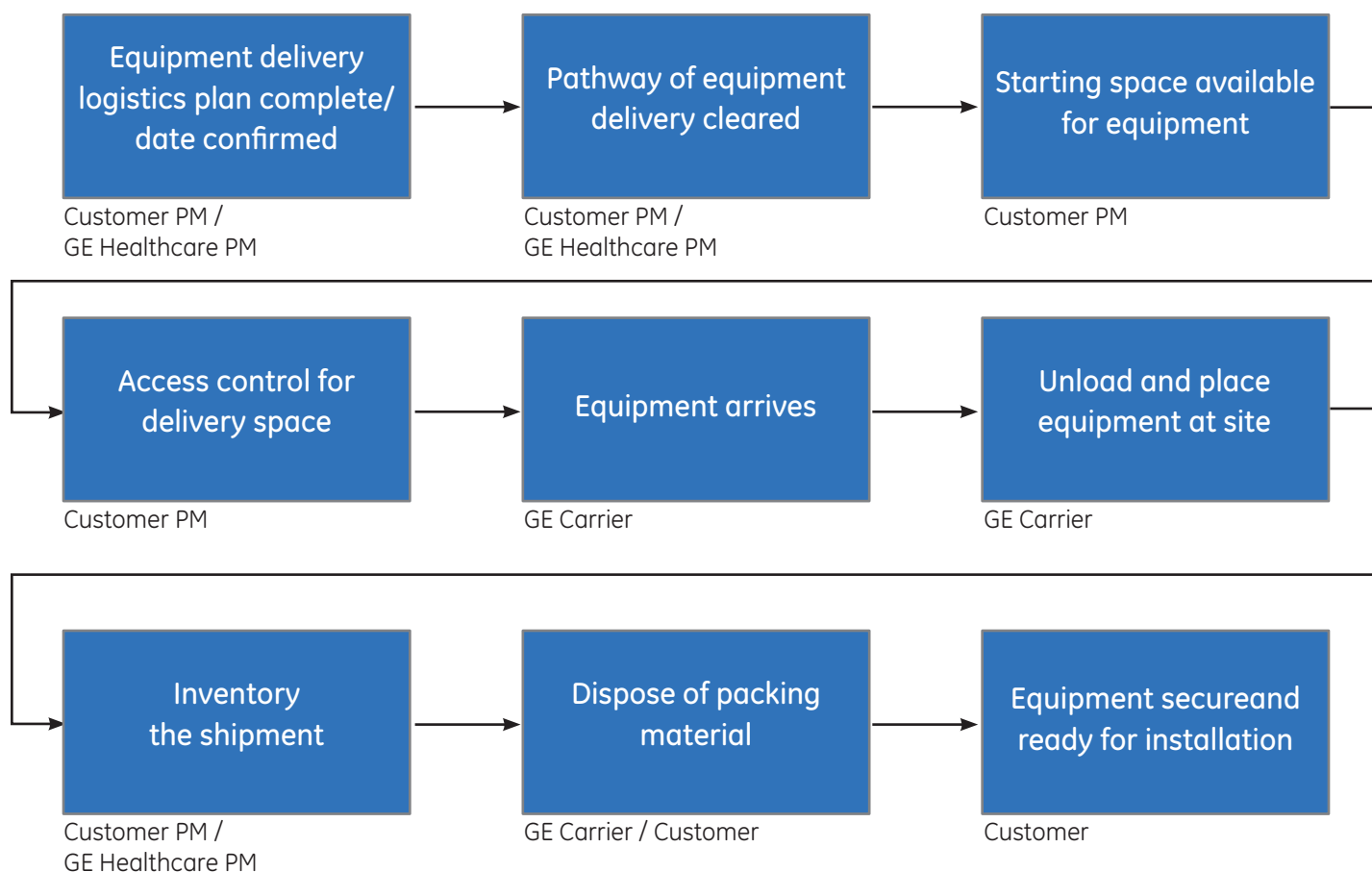
- All the network equipment and network drops in place and ready to be activated
- All IP addresses identified and available for the GE Healthcare Field Engineer
- All power outlets for servers and lab equipment installed, tested and ready for the installation
- Install the necessary cables for the lab installation
 - The GE Healthcare Field Engineer will work with the hospital team to identify the placement of the cables in the previously prepared cable pathways
 - GE Healthcare does not pull the cables for the control rooms to the procedure rooms
- Upgrades often require heavy monitors to be replaced with flat panel monitors creating balance issues on the boom
 - Hospitals must provide hardware and personnel to adjust the balance of the boom

System Delivery and Install Dates

The delivery includes all the components of your Mac-Lab / CardioLab as well as the chosen workstation areas and monitors. The delivery is coordinated between you, the customer and your GE Healthcare Project Manager. The delivery of the equipment is not dependant on Site Readiness. In the event that equipment is delivered prior to Site Readiness for Installation, accommodations will need to be made for safe and secure storage.

Other equipment delivery considerations include:

- Scheduling an GE Healthcare's early delivery items
- Scheduling specific day of equipment arrival
- Clearing delivery pathways
- Identifying space for the delivered equipment
- Receipt and sign-off of the shipment
- Inventory of the delivery
- Trash removal, if necessary



System Delivery and Install Dates (continued)

Site Readiness is critical to the efficient, on-time and successful installation of your GE Healthcare Mac-Lab / CardioLab. Site Readiness for installation is coordinated between you, the customer, your IT department and your GE Healthcare Project Manager. Use the Site Readiness Assessment Checklists, located in the Assessment Lists section of this Guide, to monitor Site Readiness.

You, the customer and your Project Manager need to confirm with your GE Healthcare Project Manager the Site Readiness schedule and provide weekly status updates.



Install and Test

- Hospital IT resources must be available during the installation to do the network systems security and establish trusts for servers and lab systems
 - IT must also load Virus SW on the servers and lab systems
 - The GE Healthcare Field Engineer (FE) can assist in getting the SW configured once it is loaded
- Review and become familiar with the GE Healthcare patches web site
 - This is where the listing of validated patches is maintained
 - Never load patches that are not validated
- Review your operations plan and be sure your team is ready to take over daily operational activities such as problem reporting and backing up your systems
- Reminder: If an after hour installation is required, an additional charge will be applied
 - Please notify your GE Healthcare Project Manager to obtain a quote

Interface and Modality Testing

Once all components are installed for the different modalities, your GE Healthcare Field Engineers will perform a complete diagnostic of your system. This can be accomplished by end-to-end testing between all the modalities, including Imaging, PACS and Invasive Field Engineers. It will entail all full blend of testing between Mac-Lab / CardioLab, Innova system, PACS and DMS system to ensure reliability and communication.

Tests will be preformed to test reliability of ADT feed, if applicable.

Applications Training

Your GE Healthcare Project Manager will coordinate the training with the GE Healthcare Applications Specialist. You will need to review vacation and training schedules so GE Healthcare can adjust the training plan and schedule to the availability of the hospital team for HQ and on-site training events

- Please inquire about the ACC/STS requirements and downloads from your GE Healthcare Applications Specialist

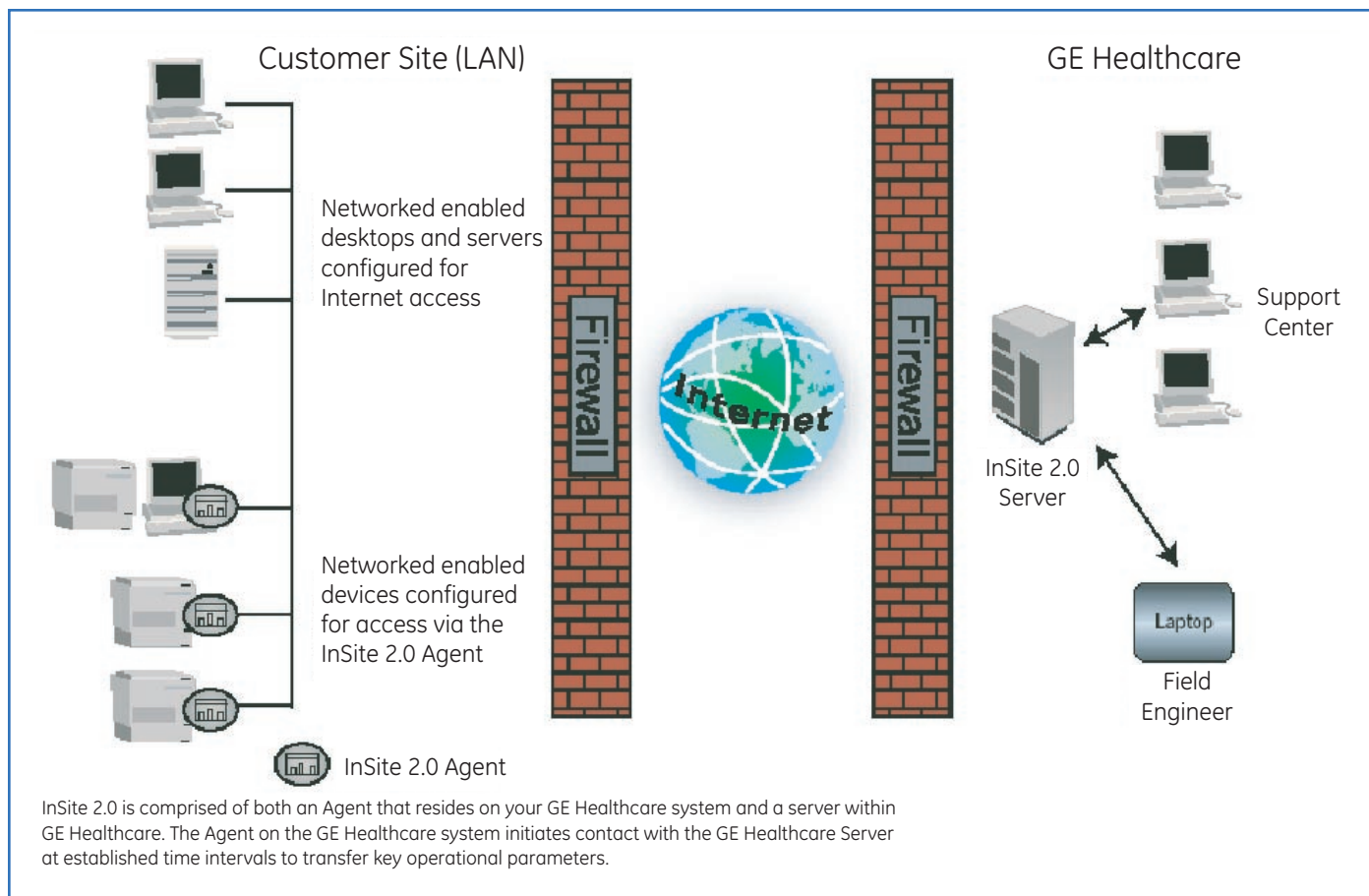
Go Live

Once you have had the first use of the Invasive Equipment with a patient on the the table.

Close Out

To understand who and how to contact GE, a formal closure to the project that the equipment installation is completed and in use. Included in this letter will be your serial numbers for the equipment, phone numbers to call Tech Support and Application Support and any follow-on items that are open such as unused application days, HL7 interfacing, etc

InSite 2.0



Key InSite 2.0 Features

- No additional firewall ports required
- Web services standard protocols using only HTTPS Port 443
- Less expensive and easier to install than VPN
- 128 bit Secure Sockets Layer (SSL) data encryption
- Connection is initiated from customer end... giving customer full access control
- Multi-level authentication, permission and role definitions

Enterprise URL:

<https://us1-ws.service.gehealthcare.com:443> <https://64.214.210.49:443>

Enterprise Tunnel URL

<https://us1-rd.service.gehealthcare.com:443> <https://64.214.210.48:443>

If needed, the IP addresses can be used in place of the preferred Enterprise and Tunnel URL's

Workstations and Carts



65 inch (Large) Workstation Desk



47 inch (Small) Workstation Desk

Mobile Cabinet
PC-MPECAB-A**Specifications**

- Weight: 40 kg.
- H/W/D: 30" x 24" x 28"
- List price: \$500.00

Benefits

- Clean enclosure for CPU and IEB
- Casters for easier servicing for Biomed and our FE's
- Fits under the control room countertop
- Brand recognition

Workstations and Carts

Nurses Workstation



Pre/Post and Nurse's Workstation w/Cart

Hospital Supplied

1 IP ADDRESS AND 1 NETWORK DROP PER WS

15 AMP/120V Standard NEMA 5-15R, 120v EMERGENCY POWER

← Dash / Solar Serial Interface Cable 6ft. limit



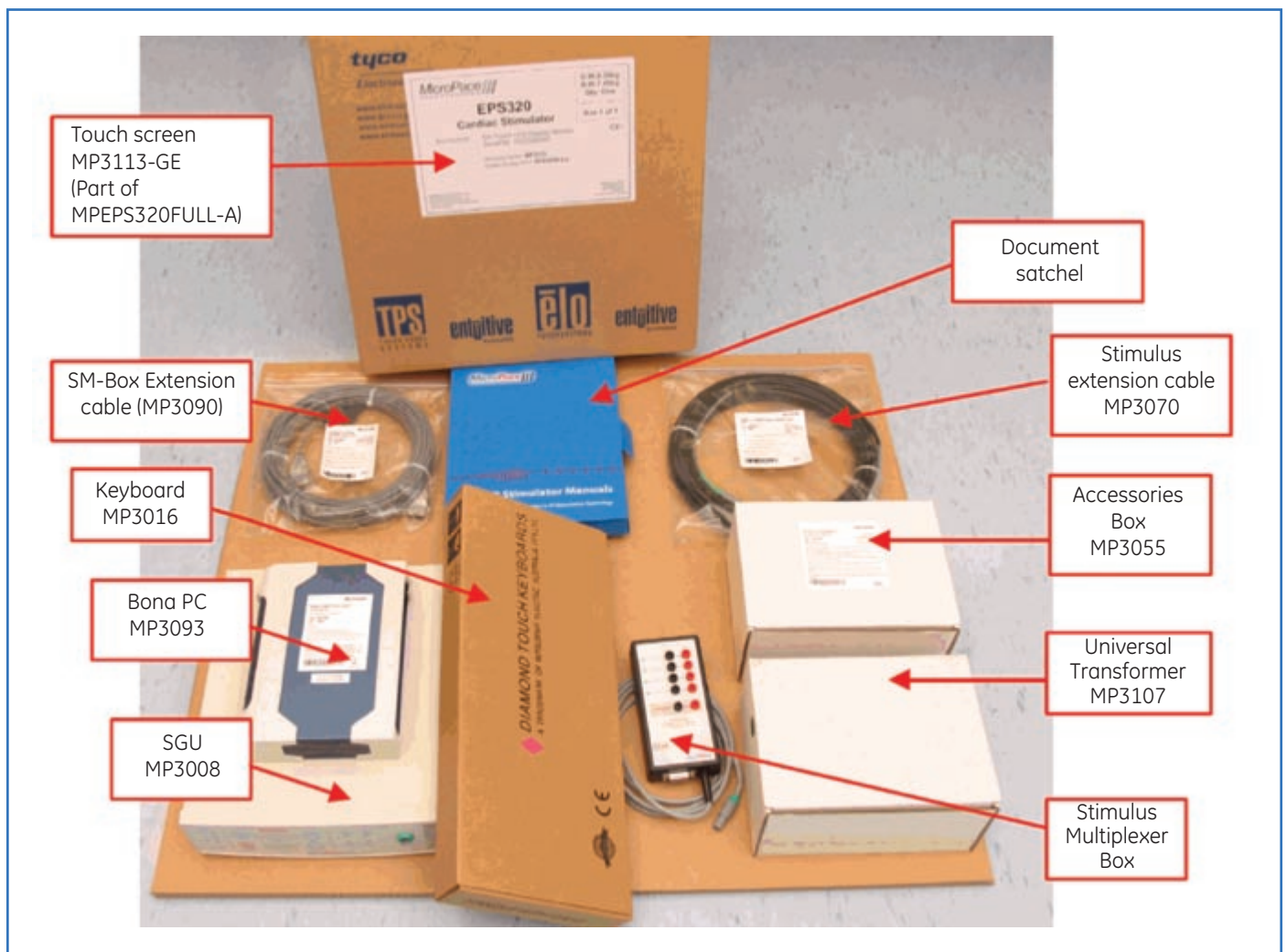
Monitoring Option (Dash Shown) Dash & Solar may be wall mounted or Dash can be mounted on the WS cart with Dash Mount

1 IP ADDRESS AND 1 NETWORK DROP PER WS typically GE Supplied

Hospital Supplied

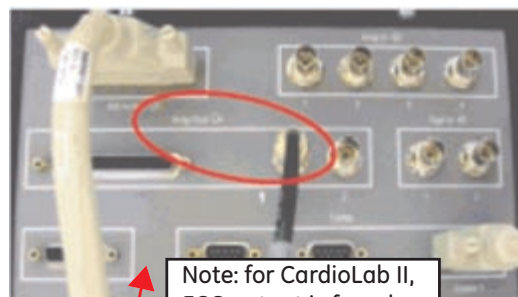
15 AMP/120V Standard NEMA 5-15R, 120v EMERGENCY POWER (can share with workstation)

MicroPace EPS320 Stimulator

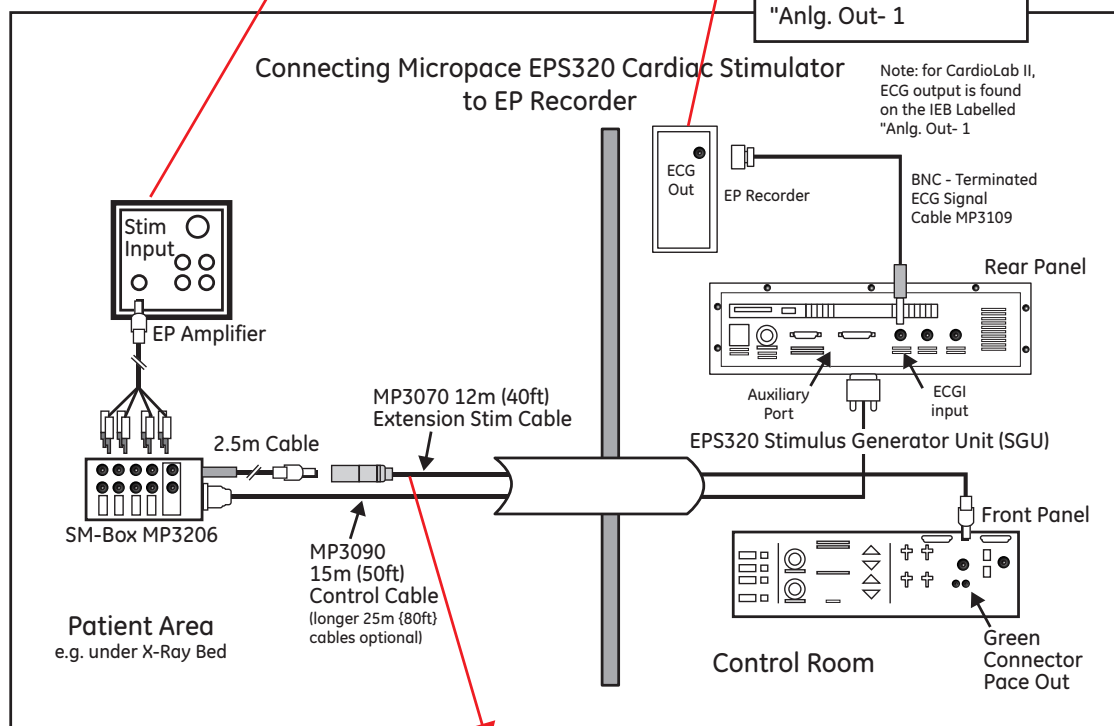


MicroPace EPS320 Stimulator

Lay out and connect Stimulus cabling, (under ground if required) between EPS320 Stimulus Generator Unit (SGU) and EP Amplifier as shown:



Note: for CardioLab II, ECG output is found on the IEB Labelled "Anlg. Out- 1"



Warning: To prevent patient micro-electrocution through capacitively coupled leakage currents. MP3070 and MP3125 cable installation must be (I) appropriately insulated and separated from any nearby mains wiring to prevent injection of mains voltage through broken insulation, (II) must not be installed next to mains voltage - energized cables and (III) should not be installed within grounded conduits. Installation should be acceptance tested by biomedical engineer for patient applied part. Class CF device.

Note that when longer (>15m) length of Extension Stim Cable is required, it is preferable to place the SGU in the operating room on top of the Amplifier under the patient table and use a long 80'/25m serial cable MP3D84-25 to interconnect PC with SGU. This will reduce noise and ground leakage currents in the whole installation.

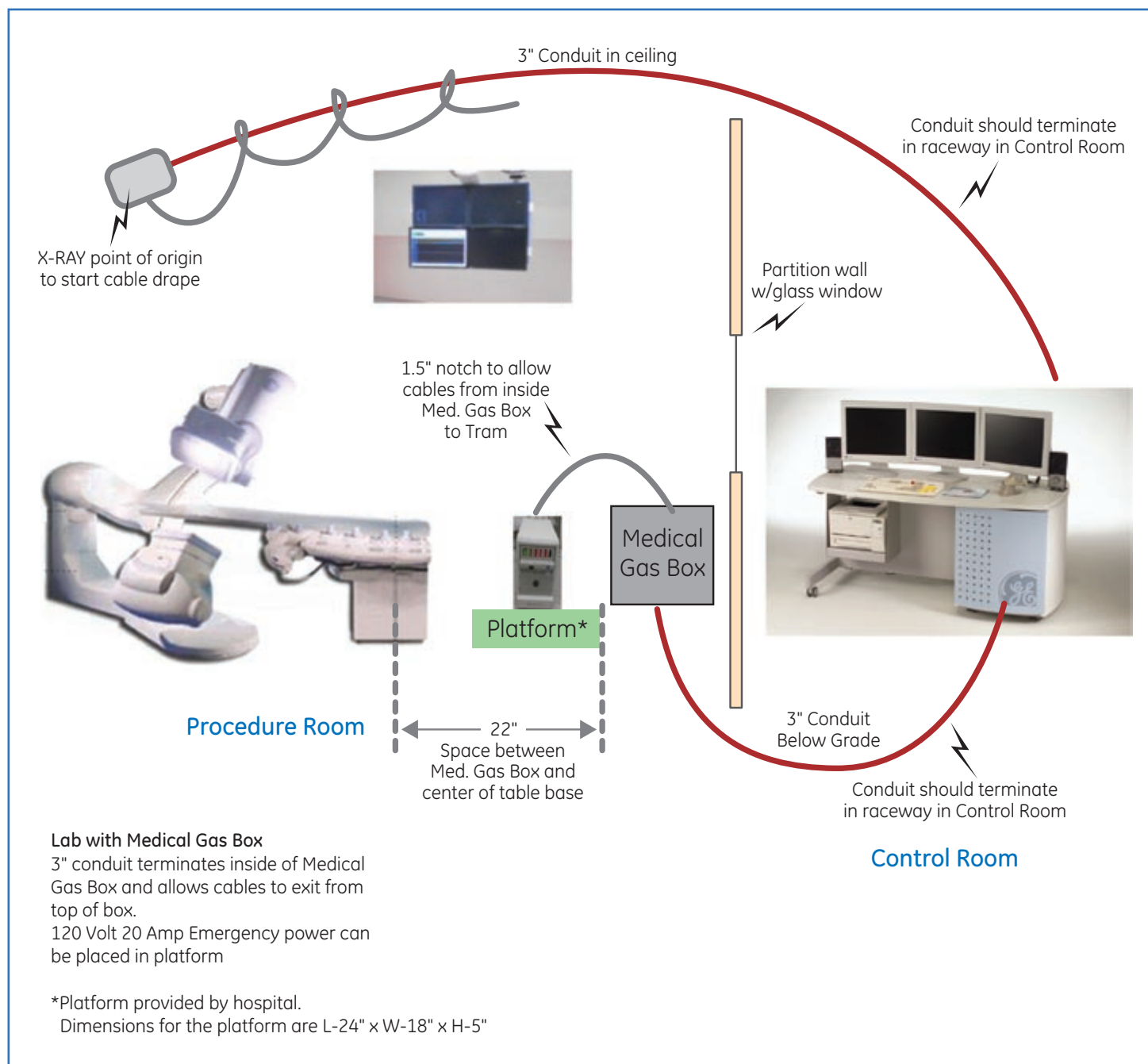
CathLab System (Standalone System)Remote Monitor
BoomRemote Monitor
Connection

Tram Connection

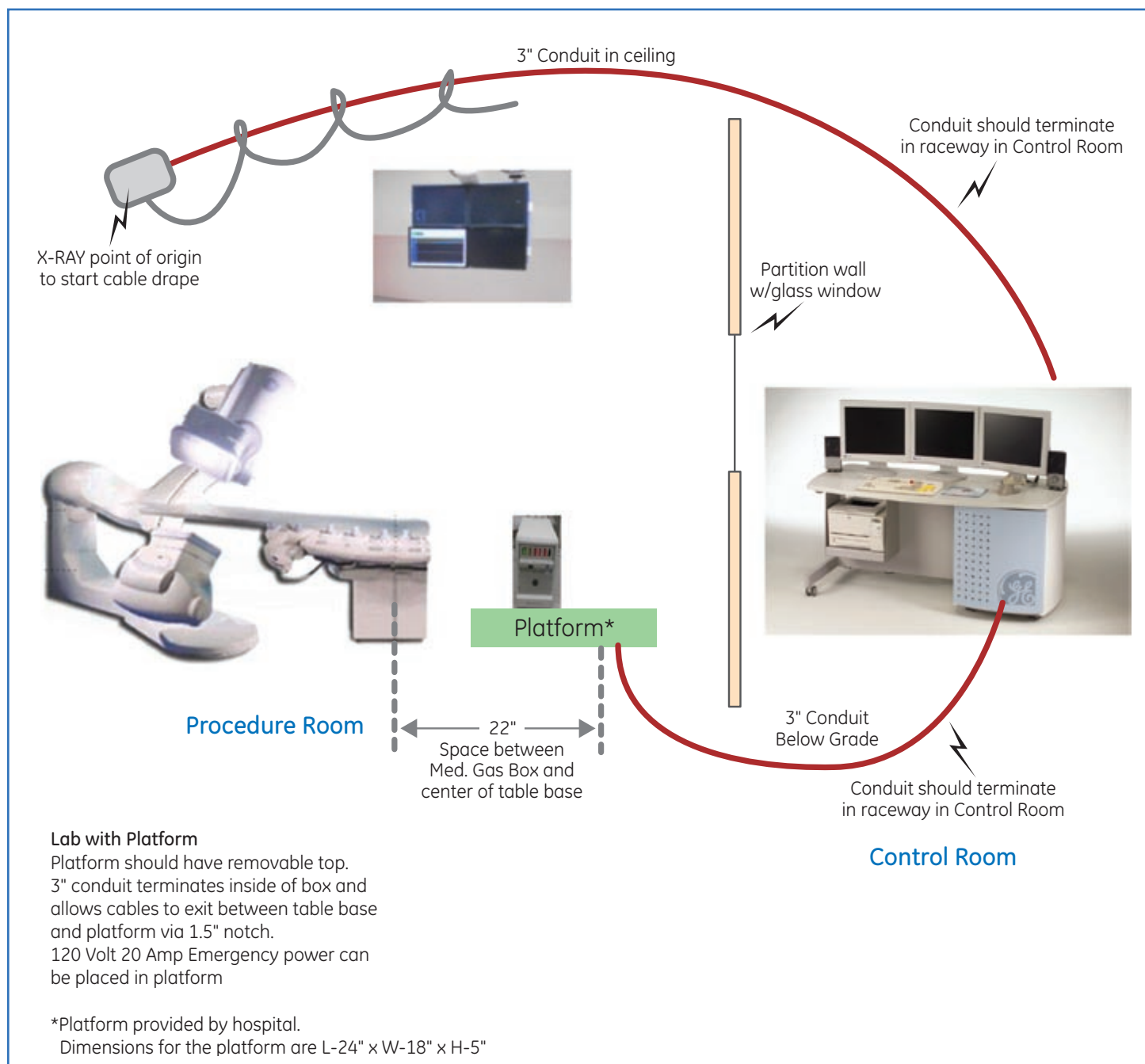


Tram

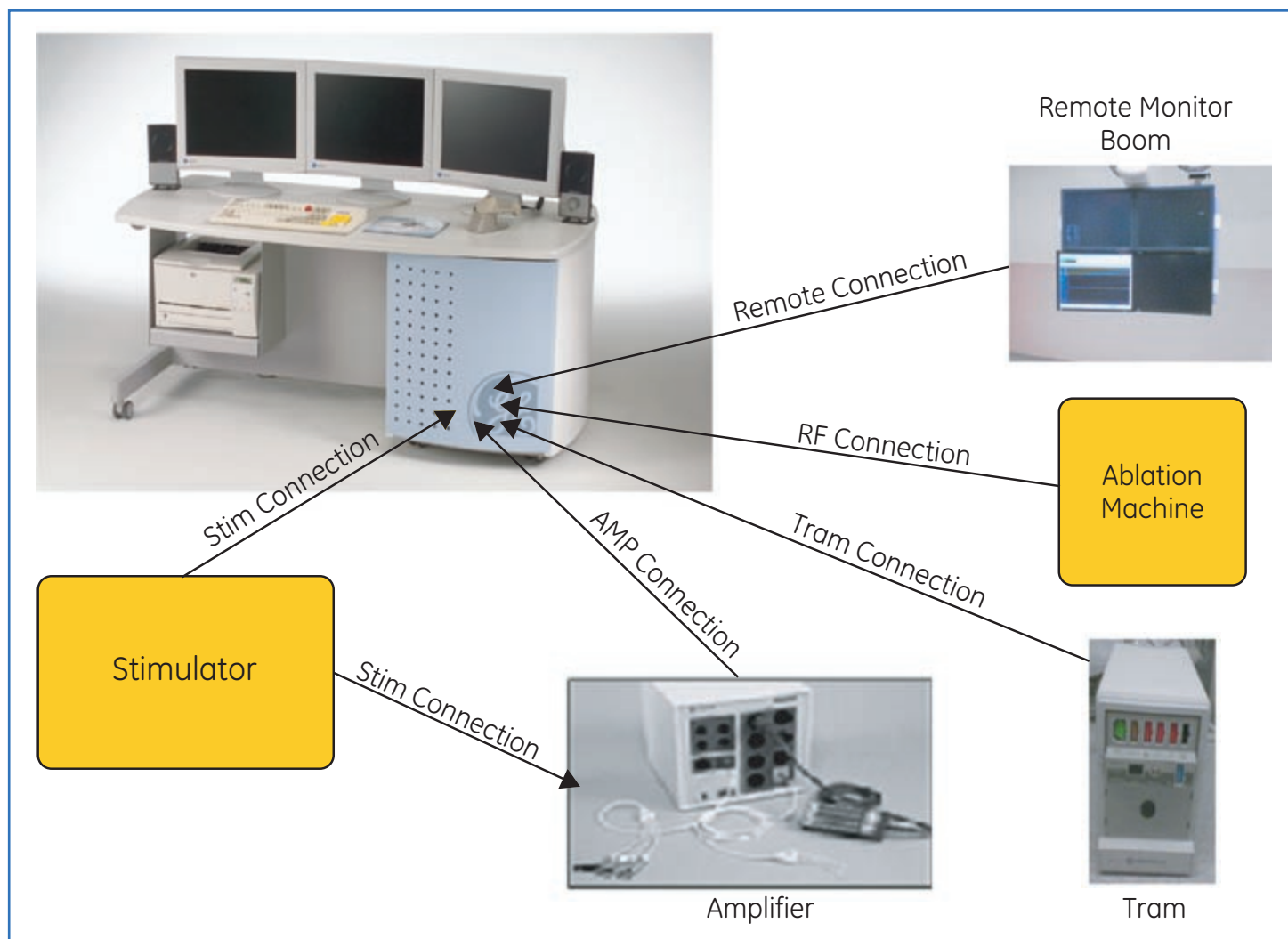
CathLab Detail (Standalone with Gas Box)



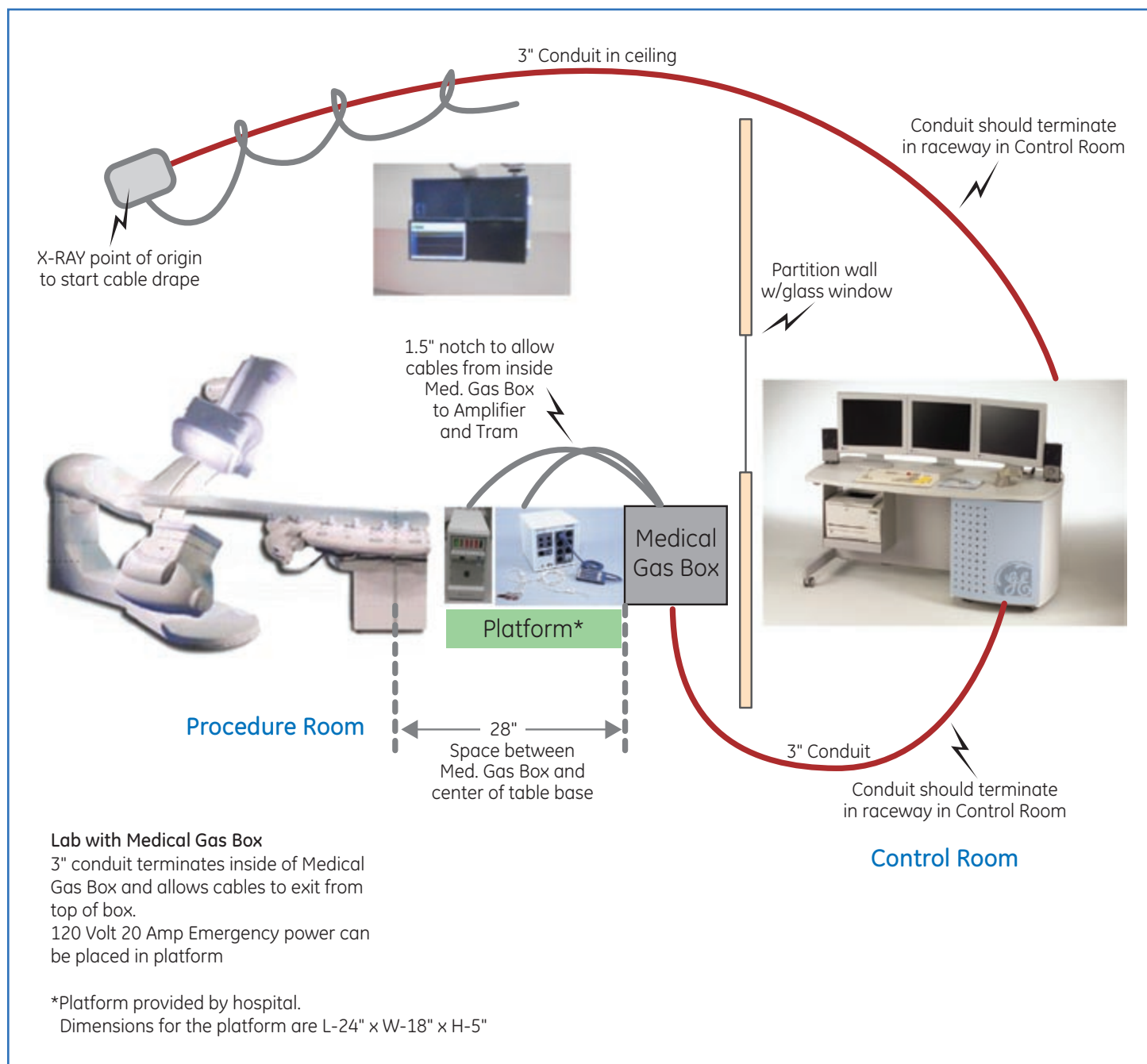
CathLab Detail (Standalone with Platform)



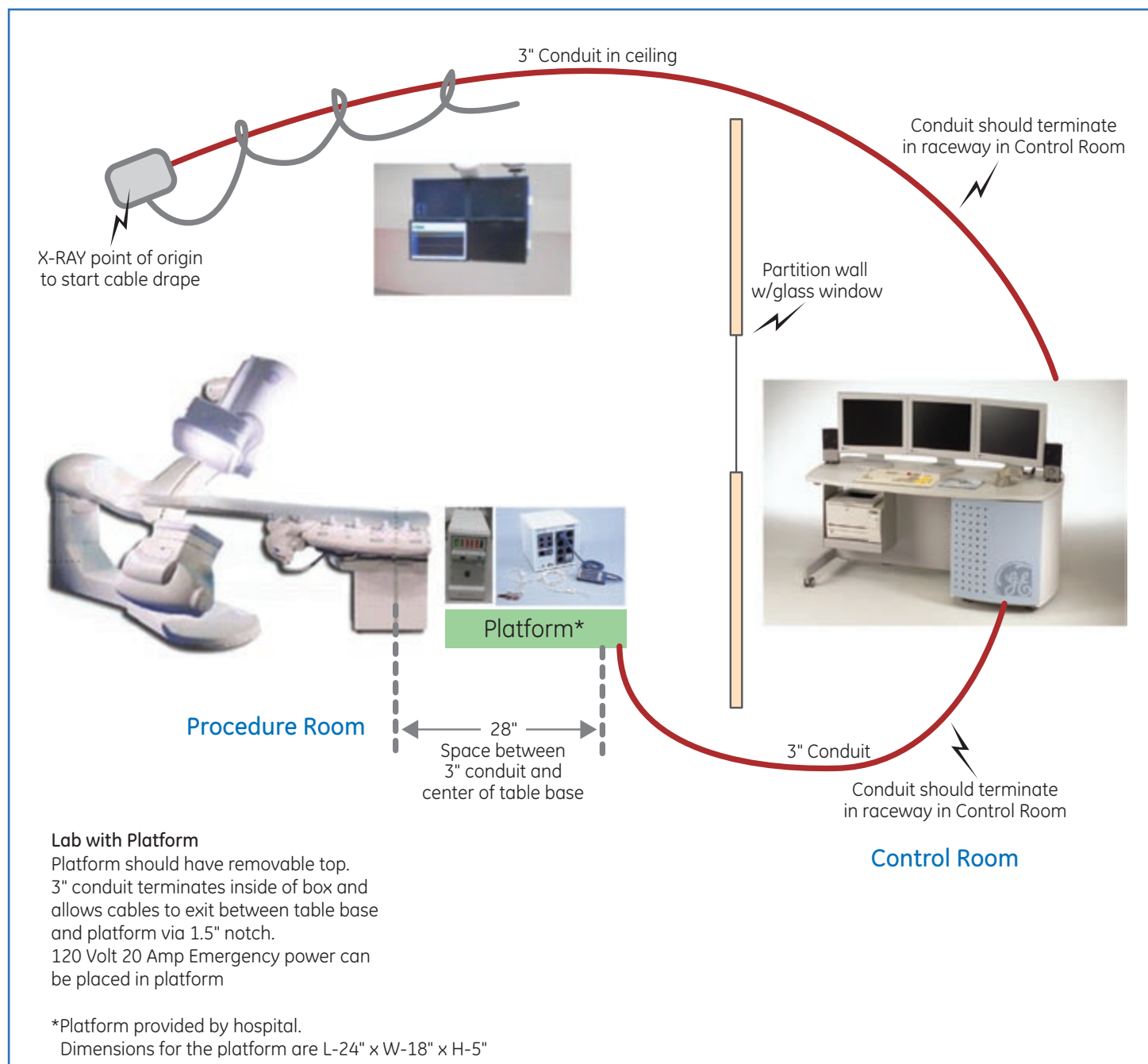
ComboLab System (Standalone System)



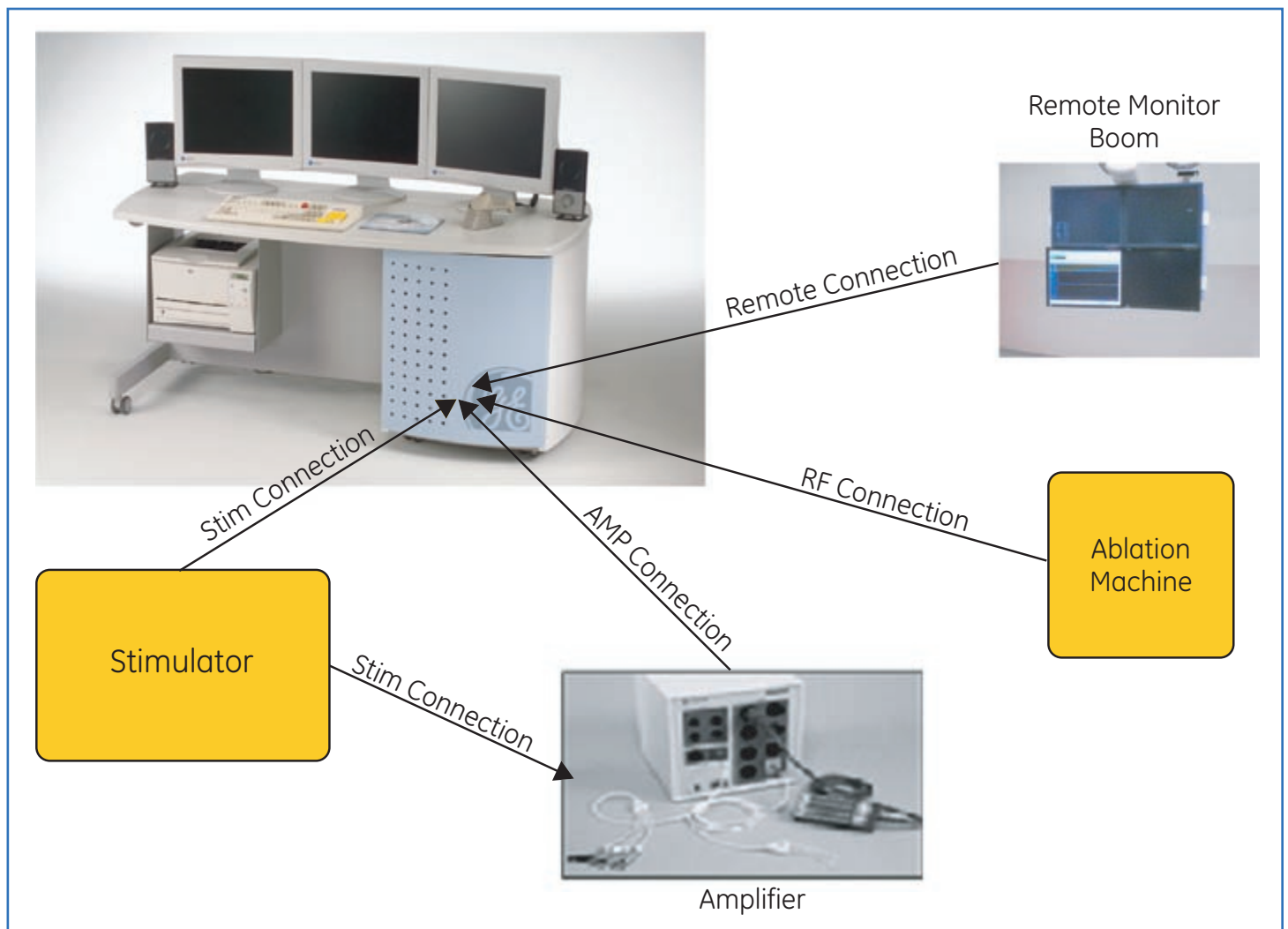
ComboLab Detail (Standalone with Gas Box)



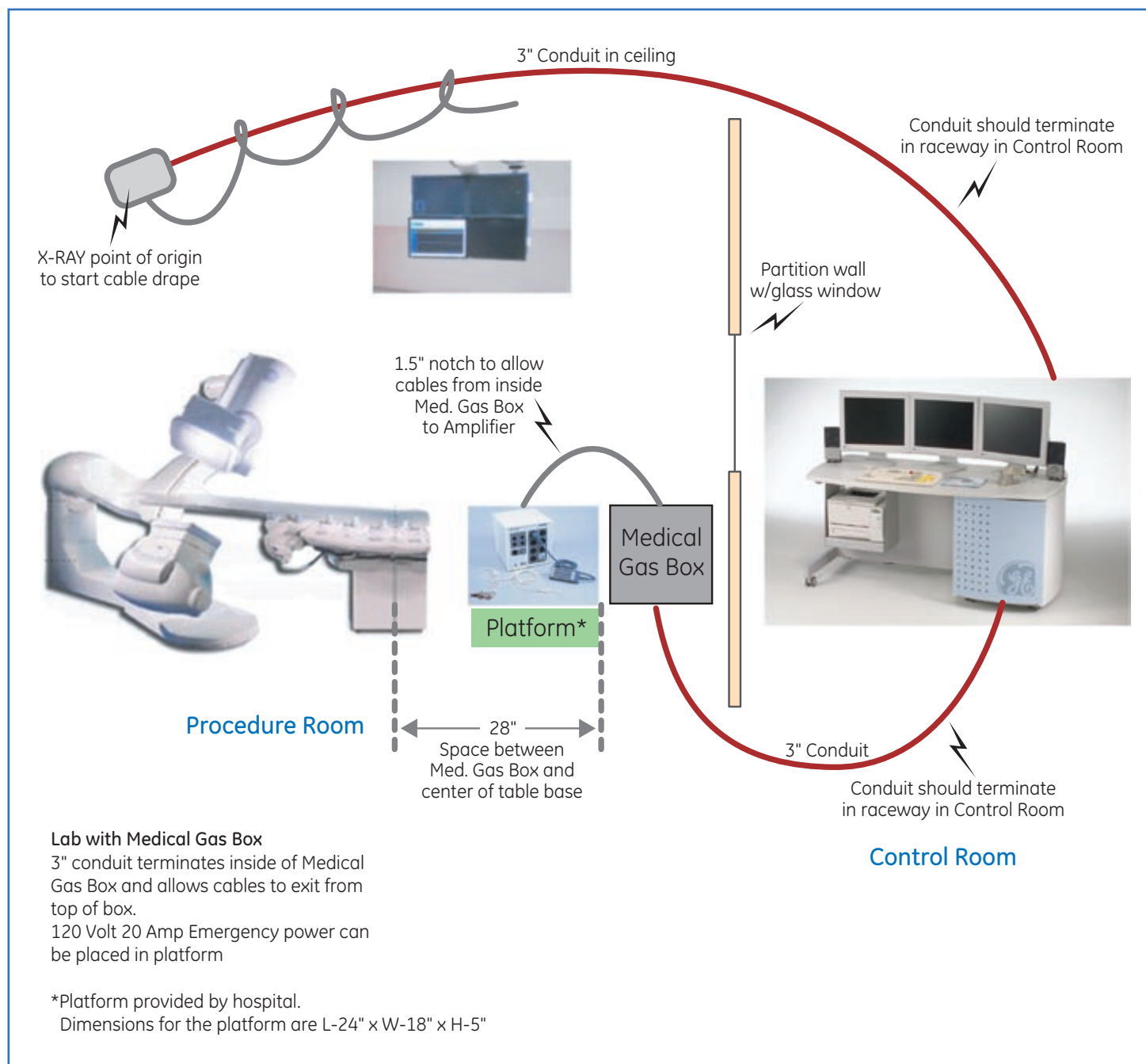
ComboLab Detail (Standalone with Platform)



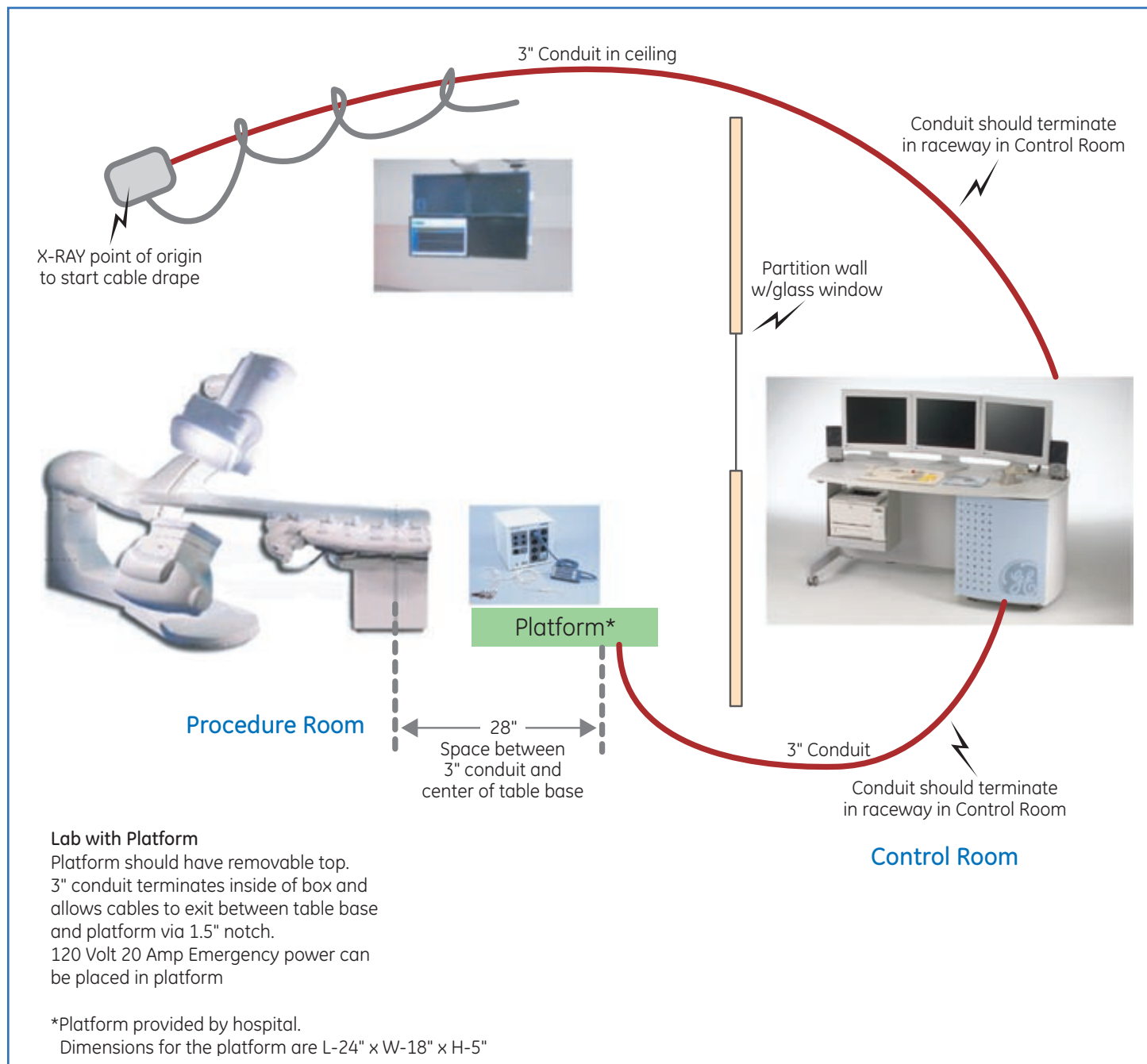
EP CardioLab System (Standalone System)



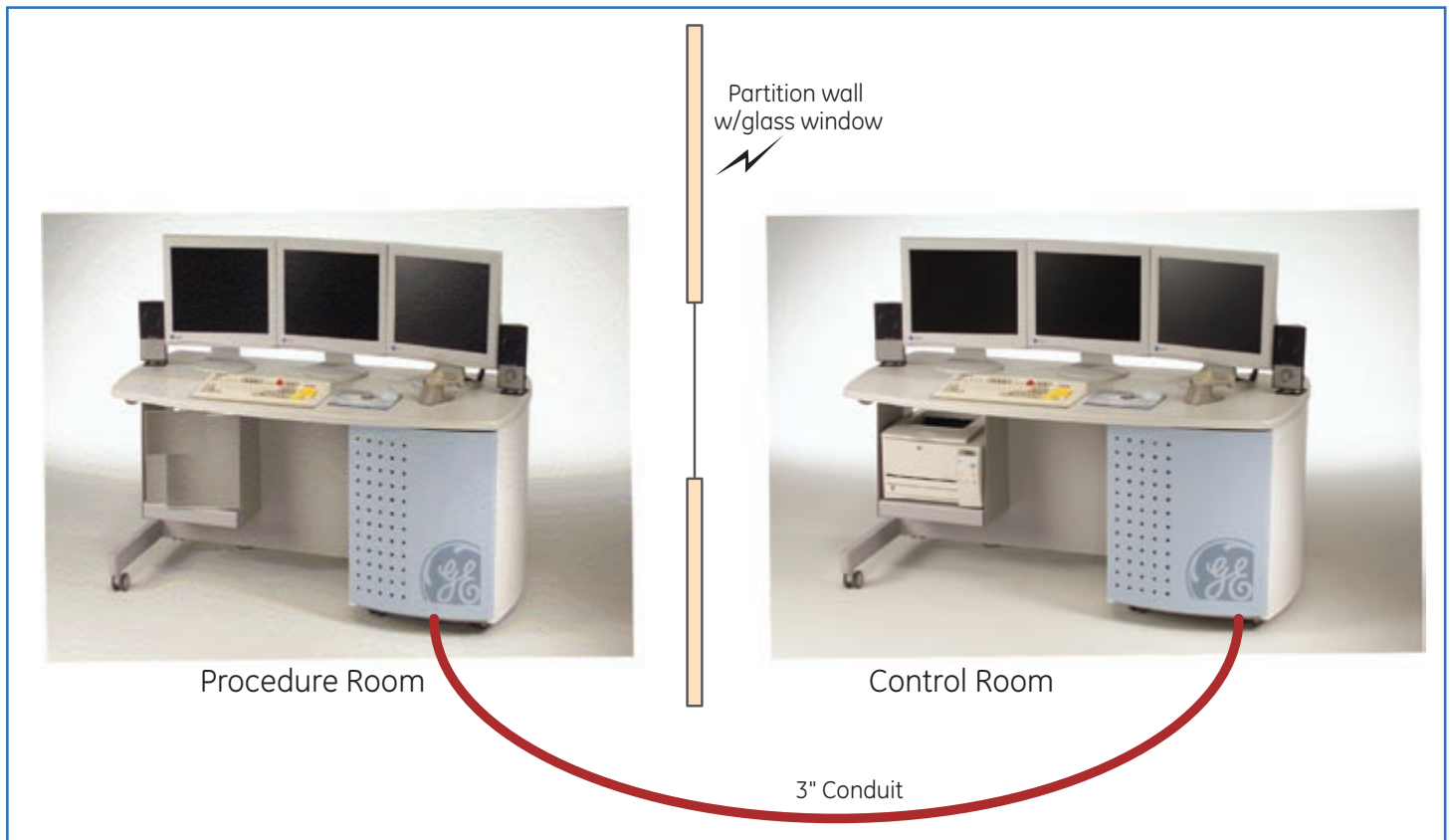
CardioLab Detail (Standalone with Gas Box)



CardioLab Detail (Standalone with platform)



RMOT With ComboLab

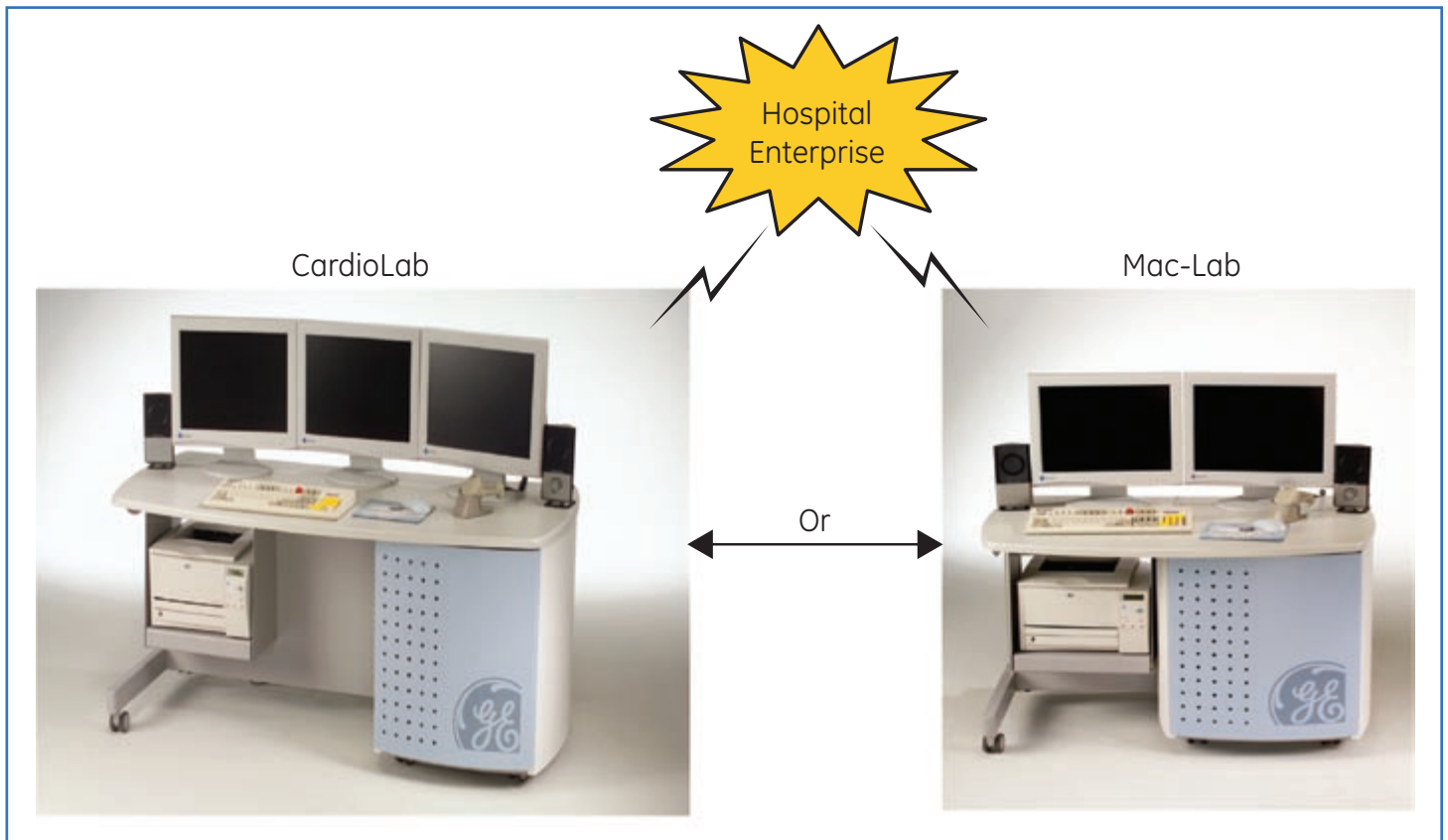


Above example shows ComboLab with RMOT.

- Follow install requirements for ComboLab standalone System.
- Add the 3" conduit from the control room to procedure room

Note: If ComboLab or Mac-Lab Standalone System then add step 2.

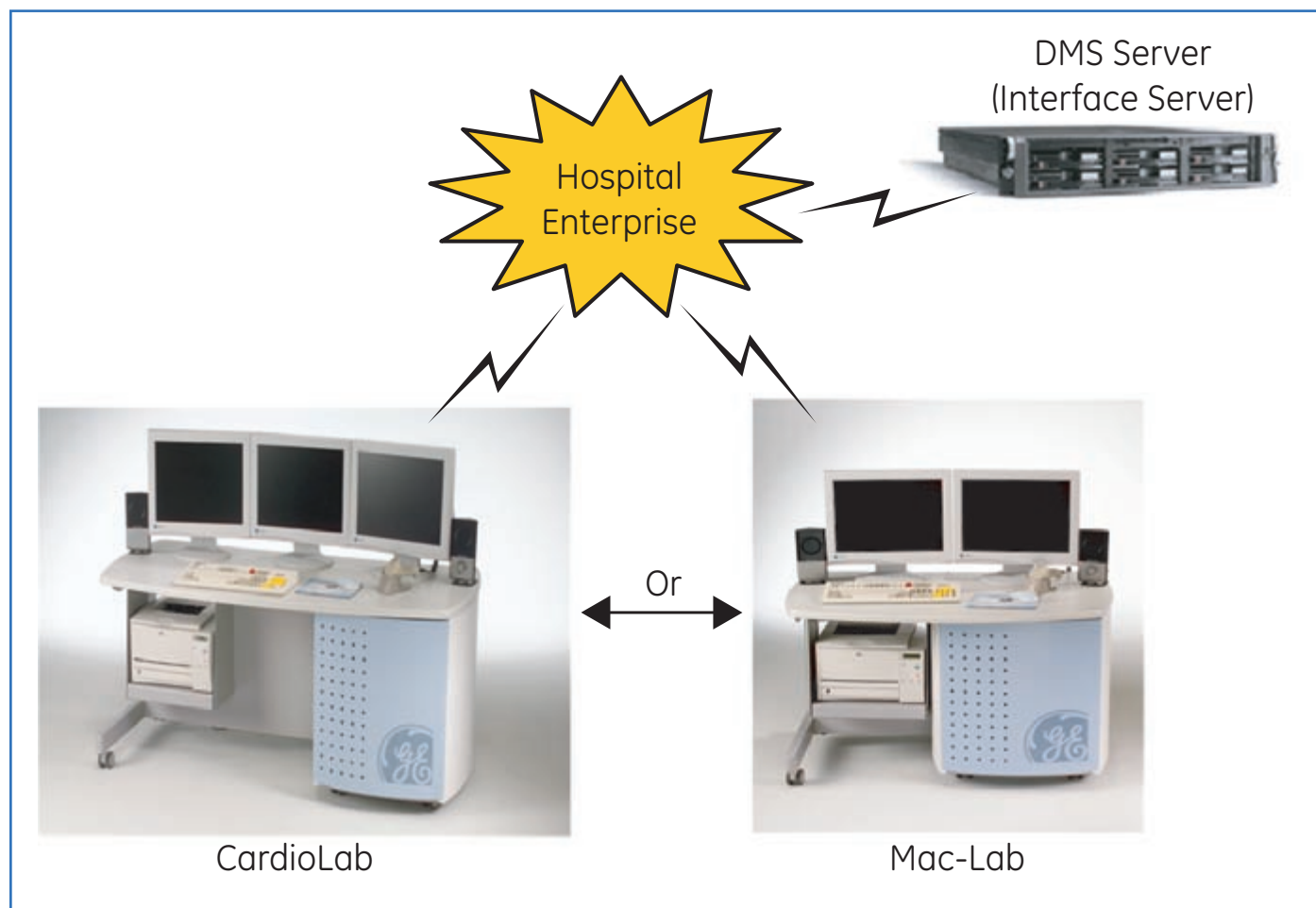
Standalone Mac-Lab / CardioLab Network Systems



Hospital Requirements:

- Pre-site planning for Mac-Lab or CardioLab Standalone System should be followed
- One network drop from hospital enterprise for either Mac-Lab or CardioLab
- Required network setup is a workgroup

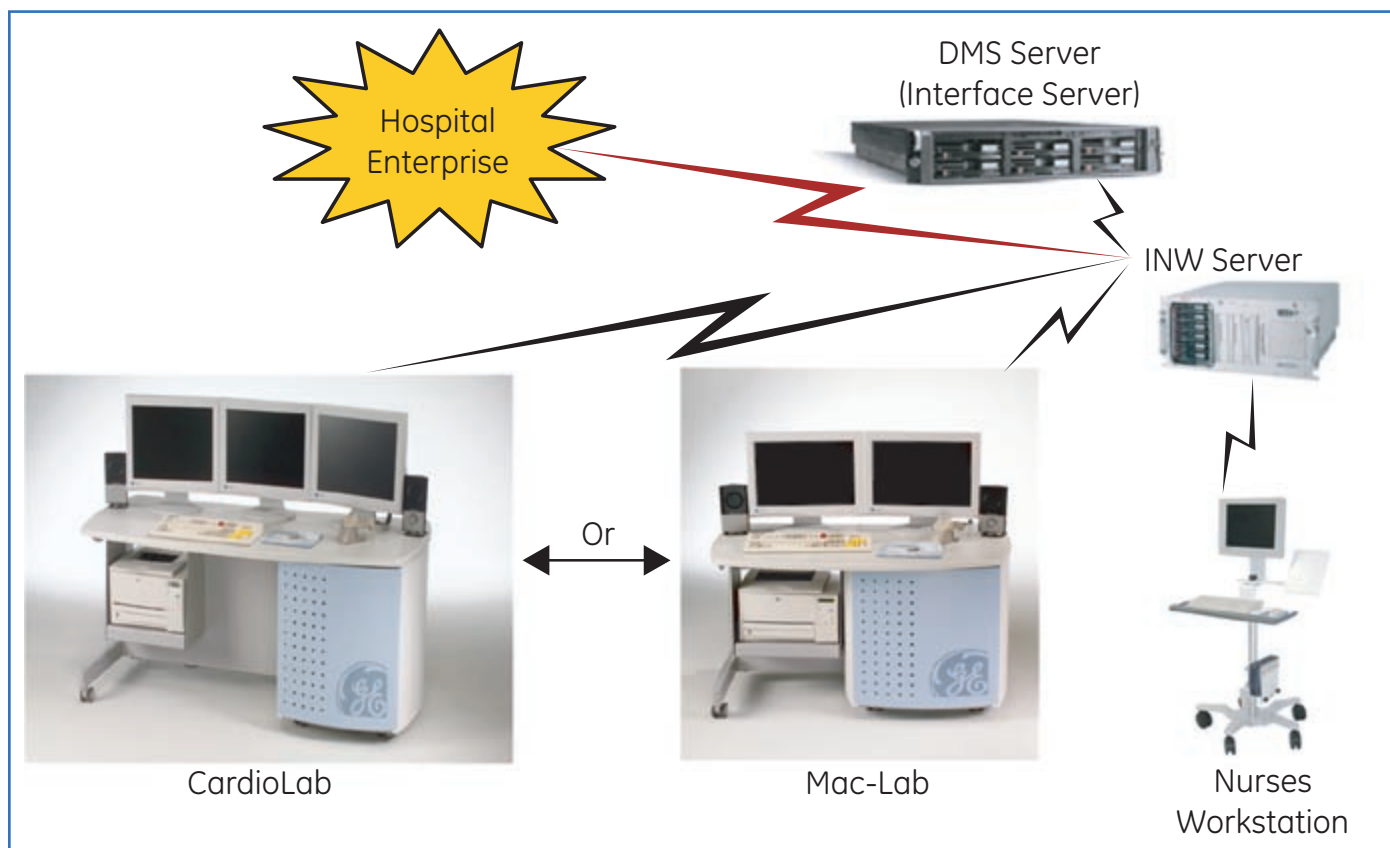
Standalone Mac-Lab / CardioLab Network Systems with DMS



Hospital Requirements:

- Pre-site planning for Mac-Lab or CardioLab Standalone System should be followed
- One network drop for each Mac-Lab / CardioLab and nurses station
- DMS Server requires three network drops and two IP addresses
- Power for a non-GE rack is 20 Amp 120 Volt. If a GE rack is purchased, use a >30 Amp 120 Volt (NEMA-1.5-3.0R).
- Required network setup is a workgroup

Standalone Mac-Lab / CardioLab Network Systems with INW and DMS



Hospital Requirements:

- Pre-site planning for Mac-Lab or CardioLab Standalone System should be followed
- One network drop for each Mac-Lab / CardioLab and nurses station
- DMS Server requires three network drops and two IP addresses
- INW server requires one network drop
- Preferred network setup is INW server (domain controller) with a trust to the enterprise domain
- Power for a non-GE rack is 20 Amp 120 Volt. If a GE rack is purchased, use a >30 Amp 120 Volt (NEMA-1.5-3.0R).

Cardiovascular Information Systems



DMS Interface Server

REQUIRES INSITE2 CONNECTION

3 NETWORK DROPS

2 IP ADDRESS

120 VOLT/6 AMP

2 U RACK SPACE

COMPAC DL380

WINDOWS 2003 SERVER

ORACLE

VALIDATED ANTIVIRUS

INCLUDES:

NORTON 2005

SYMANTEC 9.0

MACAFEE SMB

MCAFFEE PROTECTION PILOT 1.0.1

TREND MICRO 6.5

ETRUST 7.1



DMS Server

REQUIRES INSITE2 CONNECTION

3 NETWORK DROPS

2 IP ADDRESS

120 VOLT/6 AM

2 U RACK SPACE

WINDOWS 2003 SERVER

ORACLE



INW Server

REQUIRES INSITE2 CONNECTION

REQUIRES 2 NETWORK DROPS

1 IP ADDRESS

120 VOLT/7.3 AMP

5 U RACK SPACE

COMPAC ML370

WINDOWS 2003

SQL SERVER



DMS Admin Server

4 NETWORK DROPS

2 IP ADDRESS

120 VOLT/6 AMP

2 U RACK SPACE

COMPAC DL380

WINDOWS 2003 SERVER

ORACLE



SERVER RACK COMES WITH A UPS AND REQUIRES:

30 AMP/120 VOLT

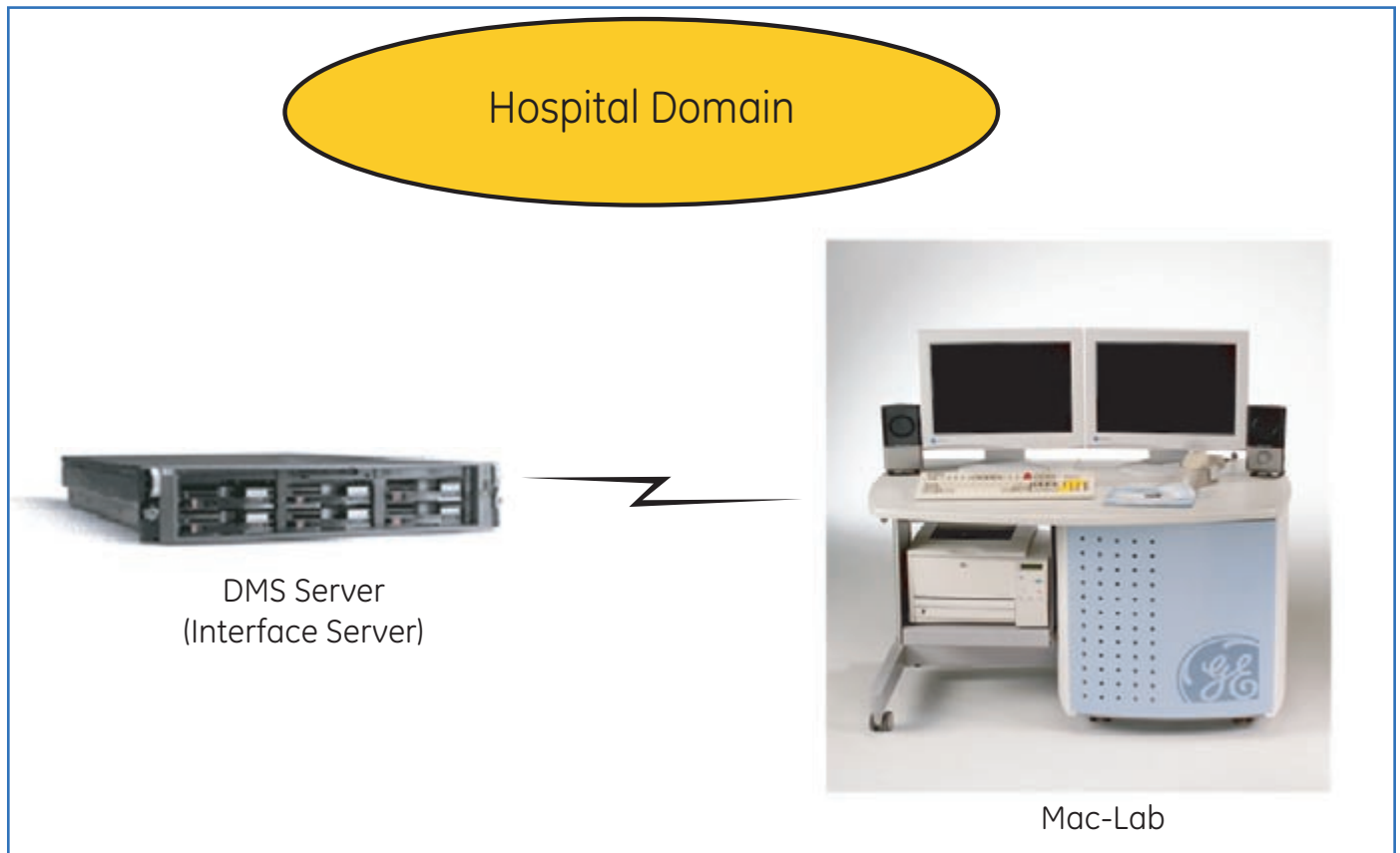
EMERGENCY POWER

PLUG IS A NEMA-L5-30P

RECEPTICLE PART NUMBER

IS A NEMA-L5-30R

Standalone Domain Example



No logical connection to Hospital Domain so Mac-Lab will use local logon accounts (MLCLUser, etc...).

Requires Workgroup configurations.

1 Way Trust Example

Hospital creates a Domain
User account called:

MuseAdmin

No logical connection to Hospital
Domain so Mac-Lab will use local
login accounts.
(MLCLUser, etc...)



DMS Server
(Interface Server)



Nurses
Workstations
(with DMS Client)

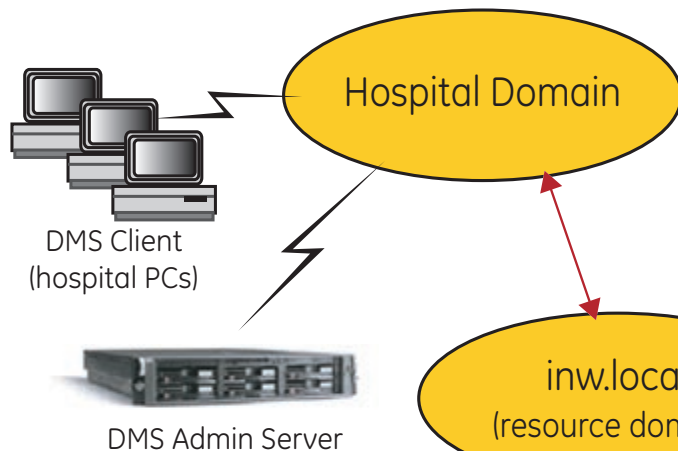


Mac-Lab

2 Way Trust Example

Hospital creates a Domain
User account called:

MuseAdmin



- New 2-way Trust needed so that hospital logons can be used on Mac-Labs and Mac-Labs can access DMS Server resources.
- This gives the hospital the ability to manage user accounts.

Hospital creates 3 Hospital
Domain Groups:

- MLCLEMERGRP
- MLCLADMGRP
- MLCLUSERGRP

Then the hospital drops in the
Cathlab users in their respective
groups

Enables hospital user accounts and gives the
INW Domain access to hospital resources like
Printers, DMS client, and the ability to add
users and user rights to the DMS.



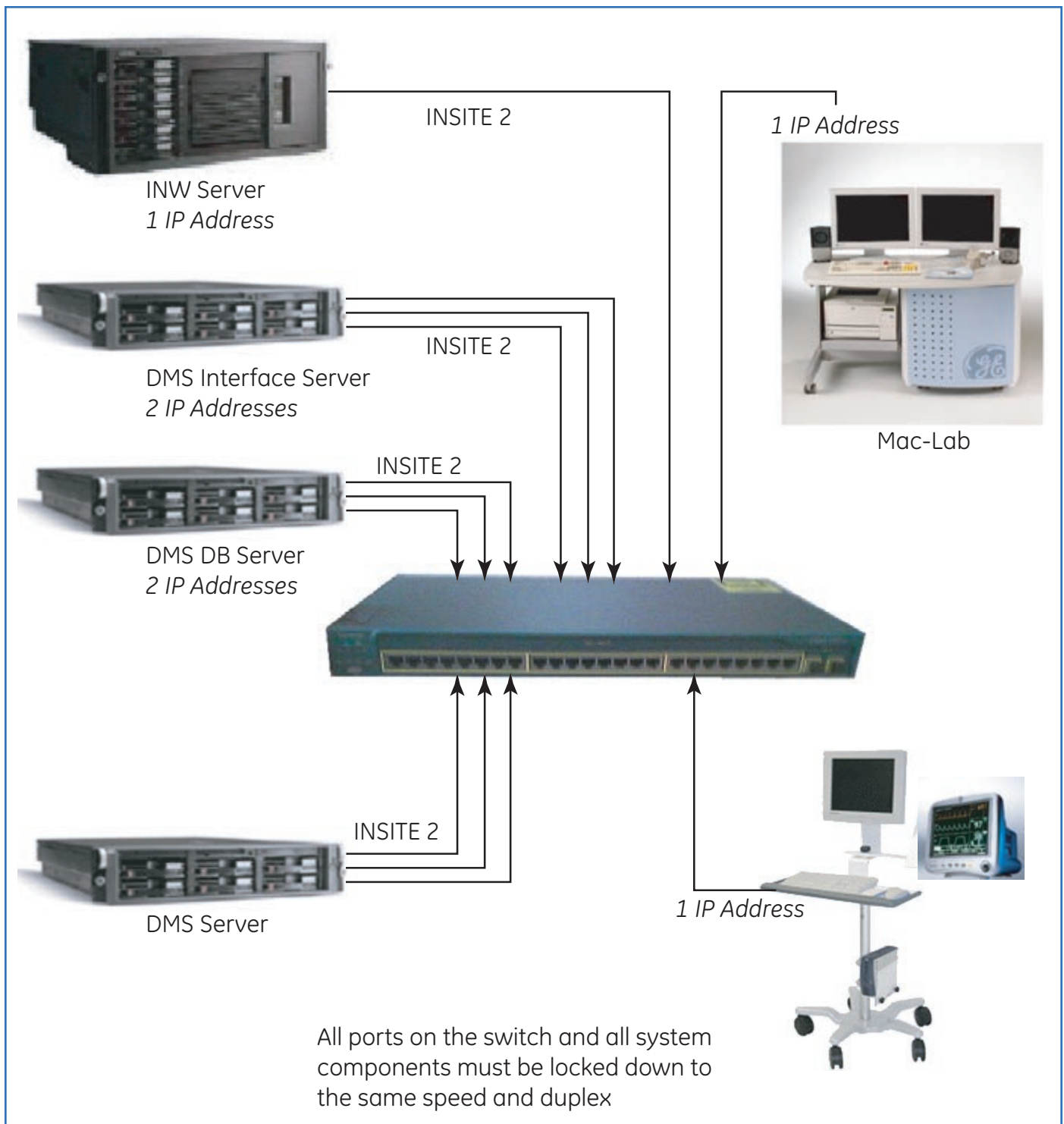
Mac-Lab



INW Server



What to Include in Diagrams



Safety Awareness

Safety

Putting People First

- The GE Healthcare lockout/tagout (LOTO) program is essential to safe service
- LOTO protects our technicians and your personnel against electrical shock
- Read about the LOTO program
- If you have questions, call 800-321-7937 (option 4)

Backup Information

GE Healthcare Lockout/Tagout Procedures

When we install, service or maintain your imaging equipment, the safety of your staff and our people is paramount. We follow strict LOTO procedures to make sure no one is injured while we work on your devices.

LOTO is a basic and mandatory safety procedure. **Lockout** means isolating the equipment from its power source so that it cannot be turned on while a technician is working on it. A switch or circuit breaker is locked in the OFF position until servicing is complete. **Tagout**, and extra precaution, means placing a warning tag on the switch saying that the equipment is being serviced and may not be operated until the tag is removed.

When our people are servicing your equipment, we may use the GE Healthcare LOTO program. During service, we lock the equipment service disconnects with a red lock and tag. If the service employee leaves the site but the equipment is not ready to return to operation, we use a yellow lock and tag. In cases where LOTO cannot be applied (such as some troubleshooting) our personnel may ask for your site Arc Flash study for the equipment being serviced. This is related to the NFPA70E regulation dealing with arc flash safety around electrical panels.

We follow the LOTO program at all sites where GE Personnel service, install or maintain medical equipment. If you require that we use your site-specific LOTO program, please provide a copy to the GE Healthcare Field Service Environmental, Health and Safety (EHS) Group for review. Before we service your equipment, we want to make sure that your program provides at least the same protection as our own.

Your GE Healthcare Field Service Engineer will be glad to review our LOTO program with you to make sure you understand it. If you have any questions, please contact the Field Services EHS Group at 800-321-7937 (option 4).

Assessment Checklist for IT Department

Critical items to be completed before installation

Check when complete

Notes / Issues / Action Plan

- ☐ InSite 2.0 internet connection established for remote support using HTTPS / Port 443

- ☐ Ensure sufficient rack space is available for servers

- ☐ Ensure servers are connected to the KVM switch

- ☐ Ensure DMS server(s) location is determined

- ☐ If rack was NOT purchased from GE Healthcare, ensure power is available for the servers

- ☐ Network cable drops completed

- ☐ Determine the network configuration

- ☐ IP addresses / network configurations given to Project Manager

- ☐ Ensure that phone with outside line is provided for trouble shooting

For detailed description of requirements for each item, refer to the GE Pre-Installation Manual (PIM) for your product.

Assessment Checklist for Electrician

Critical items to be completed before installation

Check when complete

Notes / Issues / Action Plan

- ☐ Conduits installed
- ☐ If rack is provided by GE Healthcare, run power to the rack
- ☐ Ensure power is available at the EP/Cath location

For detailed description of requirements for each item, refer to the GE Pre-Installation Manual (PIM) for your product.

Assessment Checklist for Bio-Med or Facilities Department

Critical items to be completed before installation

Check when complete

Notes / Issues / Action Plan

- ☐ Video and power cables to the boom completed
- ☐ Ensure that Cables are pulled from the x-ray table base to the control room
- ☐ Arrangements made to balance the boom if GE Healthcare is replacing a CRT with a lightweight flat screen display (LCD)
- ☐ Platform built for amplifier or tram per specifications

For detailed description of requirements for each item, refer to the GE Pre-Installation Manual (PIM) for your product.

Assessment Checklist for Cath Lab Director

Critical items to be completed before installation

Check when complete

Notes / Issues / Action Plan

- ☐ Ensure GE Healthcare HQ training has been scheduled
- ☐ Invasive pressure cables have been ordered from the Transducer supplier
- ☐ Invasive pressure cables have been ordered from the Transducer supplier

For detailed description of requirements for each item, refer to the GE Pre-Installation Manual (PIM) for your product.

Product Support for Mac-Lab / CardioLab

GE Technical Support in Jupiter, FL and GE Field Service Personnel are responsible for the installation and technical support of the Mac-Lab / Cardio Lab.

GE Clinical Applications for Invasive Cardiology is responsible for providing operational training on the Mac-Lab / CardioLab.

GE Technical Support – 1-800-558-7044

GE Clinical Applications Support- 1-800-477-8252

GE Sales Support – 1-800-558-5544

Assessment Checklist for IT Department

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For detailed description of requirements for each item, refer to the GE Pre-Installation Manual (PIM) for your product.

Terminology/Acronyms

ADT.....	Admission, Discharge, Transfer
CVIS.....	Cardiovascular Information System
DAS.....	DICOM Application Server
DB.....	Data Base
DMS.....	Data Management system
DMWL.....	DICOM Modality Worklist
FE.....	Field Engineer
HIS.....	Hospital Information System
HL7.....	Health Level Seven (www.hl7.org)
INW.....	Invasive Network
IP.....	Internet Protocol
IT.....	Information Technology
KVM.....	Keyboard, Video, Mouse
LAN.....	Local Area Network
MMPS.....	Modality Performed Procedure Step
NEMA.....	National Electrical Manufacturers Association
PACS.....	Picture and Archiving Communications System
PIM.....	Pre-Installation Manual
PM.....	Project Manager
RIS.....	Radiology Information System
ROC.....	Remote Operations Center
RMOT.....	Remote Operators Terminal
SAN.....	Storage Area Network
UPS.....	Uninterruptible Power Supply
VLAN.....	Virtual Local Area Network
VPN.....	Virtual Private Network
WAN.....	Wide Area Network
ZSE.....	Zone Support Engineer



imagination at work

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